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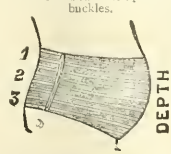

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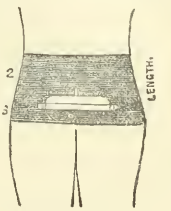

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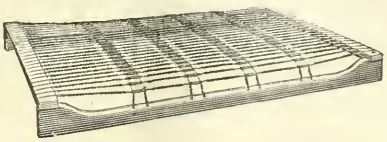

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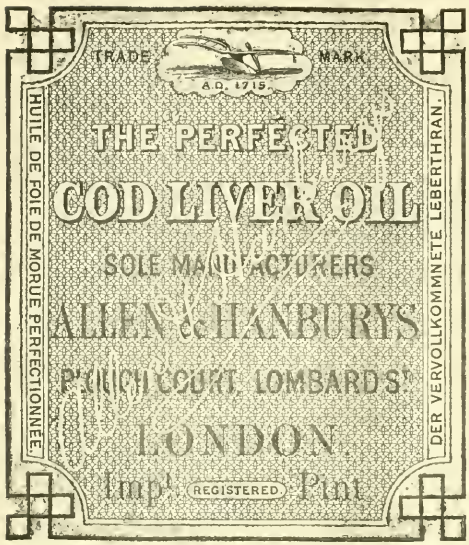

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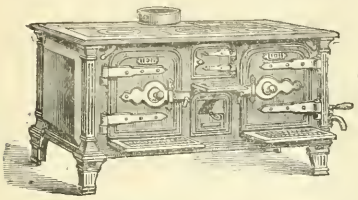

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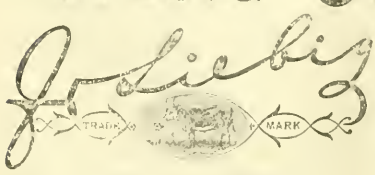

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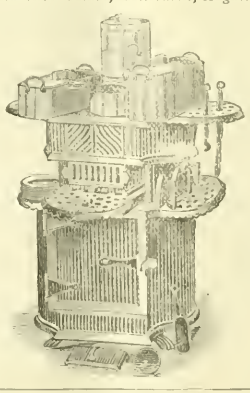

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Medical Record.

REICHERT ON POISONING BY CARBOLIC ACID.

Dr. E. T. Reichert, in a Contribution to the Study of Cardiac Depressants (*Amer. Jour. of Med. Sci.*, Oct. 1881), summarises fifty-six cases of poisoning by carbolic acid, and analyses the physiological action of this poison. Superficially reviewing the general symptoms of poisoning by carbolic acid, he finds that the poison is absorbed with great rapidity, and the evidences of its toxic properties are soon manifested. In the course of a few minutes, these become so rapidly aggravated that the system is profoundly affected; and, indeed, two cases offer illustrations of its acting with the same deadliness and frightful rapidity as have been noted in cases of poisoning by the more virulent hydrocyanic acid. In cases which have been under observation from the time of the ingestion of the poison, symptoms have been observed to appear almost immediately, which indicate that the acid finds its way into the circulation as soon as it comes into contact with an absorbent surface, whether it be skin, stomach, rectum, pulmonary acini, or wounds.

The first symptom generally appreciated is a burning pain in the parts of the body with which the acid has come into contact, provided the acid has been of sufficient concentration. In some cases, however, no pain is experienced, and even a diminution of sensibility may be present. Disorders of cerebration are then likely to follow, as evidenced by a confused condition of thought, difficulty of speech, depression, restlessness and bewilderment, vertigo, and delirium. Insensibility is one of the most frequent, earliest, and constant of the phenomena, but occasionally it does not make its appearance until late. Nausea and vomiting may be present, but this does not occur in more than twenty per cent. of the cases. Uncontrollable vomiting occurred in one case, while in another it was very severe, and in a third was moderate. Even drugs seem to have little power to bring about emesis, for, in about twenty per cent. of the cases in which different emetics were given, vomiting occurred in about one-half of them. The pulse and respiration, like the nervous system, are seriously affected; the former in a large percentage of cases becoming feeble, frequent, and intermittent, but in very exceptional cases slow and weak. The respiration was soon affected, and in more than half of the cases, where it was particularly noted, was stertorous to a greater or less, but generally well marked degree; and in rare instances it is described as being dyspnœic, slow, husky, or hurried. Occasionally the face is flushed, but more often a paleness is present. The skin is exceptionally hot and dry, and in a large portion of cases is cold and clammy, especially in the extremities; and in a single case a hot skin was followed by coldness. Lividity, more or less marked, is a frequently noted symptom; salivation was also observed. The temperature was stated to have risen above the normal in three cases, while in two it was lowered, and in a sixth case was natural. Frothing at the nose and mouth occurred in about ten per cent. of the cases, and deglutition was difficult in five, and impossible in ten. In four, the odour of the acid was detected in the exhalations. In ten cases, the urine was noted as being coloured greenish, blackish, or brownish.

Relaxation of the bowels was occasionally noticed, and the stools in several instances were described as being brownish, blackish, or greenish. The pupils were variously affected, but in over half of the cases in which they were specially examined were found to be contracted; in less than a fifth they were dilated; in four they were unaffected; in two, dilatation was followed by contraction; and in another there was first dilatation, then contraction, and ultimately dilatation. Convulsive movements occurred in fourteen cases; in one they were violent; in three were mere twitchings; and in a similar number trismus was present. Anæsthesia was recorded in about fifteen per cent. of the cases, but was undoubtedly present in the vast majority where insensibility was recorded to signify this condition, together with a loss of consciousness. Protrusion of the eyeballs, pain in the head or back, hiccough, muscular weakness, tremors, thirst, harshness of voice, and involuntary micturition were also exceptionally noted. Symptoms of pneumonia, pulmonary congestion, or of meningitis, or muco-purulent expectoration, were observed in six cases.

Pain in the mouth, œsophagus, and stomach, frothing at the mouth or nose, insensibility, difficult or impossible deglutition, a cold and clammy skin, stertorous respiration, a frequent, small, and intermittent pulse, contracted pupils, anæsthesia, and a brownish, blackish, or greenish urine, are the most constant and characteristic symptoms, and the latter is probably pathognomonic.

Experiments made on the lower animals yield results in accordance with the results produced in man. The nervous system is profoundly affected. Convulsions are more prominent than in man, and are, indeed, almost constant symptoms. They are generally clonic, but may assume a decidedly tetanic character. Whether their origin is spinal or peripheral, is a matter of dispute. Most probably it is entirely centric, as is also the loss of reflex action. The cerebral functions are early and seriously affected. The action of the acid on the circulation has not been fully studied. There can be no doubt, however, that the poison acts ultimately as a direct and decided cardiac depressant—causing death indeed very frequently, if not in the large majority of cases, in this way. The frequent, feeble, and intermittent pulse, frequently noticed in man, is strong evidence of a decided depressant action on the heart, as is also the slow and feeble pulse, which at times has been noted. The at first frequent, but afterwards deep, slow, and laborious respirations, have both a centric and a peripheric origin, and are due, at first, to a stimulation of both the pneumogastric peripheries and centres, and later to a paralysis of the same. The local action of the acid is both irritant and caustic. The walls of the stomach may be disorganised; but the gastric mucous membrane is not always affected throughout. The occurrence of nausea, retching, and emesis, or the utter impossibility of inducing these phenomena by giving emetics by the stomach, may be explained by the irritant and corrosive properties. When the acid first reaches the gastric mucous membrane, it at once irritates the peripheries of the vagi nerves; and whether there be vomiting following the irritation, or whether the irritation is quickly superseded by a physiological destruction of the terminations of the nerves, is obviously determined by the relation existing between

the rapidity with which the irritant effects are followed by those of a caustic character. That the peripheral ends of the vagi are soon seriously affected and functionally destroyed is corroborated by the fact of the great difficulty, or even impossibility, of inducing emesis by those drugs which effect this phenomenon by a direct local irritant action.

What becomes of carbolic acid in the system, and the condition in which it is absorbed, are unsolved questions. It is certainly in part eliminated through the urine and the skin. The peculiar coloured urine contains oxidation products of the acid, and also salts of conjugated phenol acids. The blood is found to be dark and fluid. The asphyxiated condition is probably due to a paralysis of the pneumogastric apparatus.

The *diagnosis* of carbolic acid poisoning in most cases should not be attended with difficulty, for the characteristic odour of the drug can generally be detected, and, in conjunction with the white or brownish stains about the mouth, and with the most characteristic symptoms as above noted, would almost be conclusive evidence, and especially so if the peculiar discoloration of the urine be present.

Treatment has usually been of little avail. The emetics used were powerless to produce emesis. The hypodermic injection of a centric emetic, as apomorphia, is indicated. Saccharated lime-water appears to afford relief. Baumann asserts that the soluble sulphates, as Glauber's and Epsom salts, are efficacious by forming sulpho-carbolates, which are innocuous. Cerna (*Philad. Med. Times*, 1879, i, p. 592) found decided evidences of the efficacy of the soluble sulphates, and although no chemical combination occurs on simply mixing carbolic acid with these salts, it is not improbable that in the animal economy such combination may occur.

THOS. STEVENSON, M.D.

TALAMON ON ANALYSIS OF NECROPSIES OF DIPHTHERIA.

M. TALAMON has presented to the Société Anatomique (*Le Progrès Médical*, 1880, No. 38) a long report of the *post mortem* appearances of 108 cases of diphtheria in little girls of ages generally varying from two to six years, some being older. Of these, nine were complicated with other diseases, so that the morbid appearances could not be fairly attributed to diphtheria; these are left out of account, 99 cases remaining for analysis. The pharynx was occupied by false membranes sixty-four times out of the 99 cases; the disease extended to the œsophagus in only one case; and the author recalls the opinions of Empis and Isambert, that air is necessary to the growth of the false membrane. In 17 cases there were marks of recent inflammation of the pharynx, and in four others the membranes had been observed during life, but death occurred from cardiac or pharyngeal paralysis, twenty or twenty-two days after the commencement of the disease, by which time the pharyngeal mucous membrane had recovered. In 14 cases, therefore, it is permissible to regard the disease as having commenced in the larynx. The larynx was found diseased in 60 cases; in twelve others, false membranes had been expectorated after operation. In two cases, the false membranes had not affected the true vocal cords, and had given rise to no symptoms of croup. The trachea was implicated almost as often as the larynx, forty-seven times in all, the disease being generalised over the tracheo-bronchial mucous membrane in thirty-nine cases; the false membrane was rarely continuous, but in patches. From a table of the period of the year in which the cases occurred, M. Talamon arrives at the following conclusions. 1. Simple pharyngeal diphtheria was more frequent in summer than in winter, in the proportion of 40 to 18.64 per cent. 2. Simple laryngeal diphtheria was more common in winter than in summer, in the proportion of 18.64 to 7.50 per cent. 3. Tracheo-bronchial complications were more common in winter, in the proportion of 55.93 to 35 per cent.

Lobular pneumonia, splenisation, atelectasis, and emphysema occurred in 72 cases, chiefly affecting the middle and lower lobes of the right lung. Pleurisy existed in eight cases, in seven being restricted to a fibrinous exudation; in one, there were a few ounces of serum. In eight, there were subpleural ecchymoses occurring in malignant cases. The state of the bronchial glands was noted only 63 times; in 48 they were enlarged, violet-coloured, sometimes softened and friable.

The stomach was altered in 17 cases; in 16 the lesions being confined to reddening and punctiform ecchymosis, possibly attributable to the emetics employed during life; in one case the mucous membrane was of a bright red colour, and covered with false membranes. In some of the other cases, the alterations of the stomach may not have been due to emetics, and probably were not.

The small intestine was injected in 17 cases. The ileum especially was the seat of a follicular catarrh, with and without swelling of Peyer's patches, and most marked near the ileo-cæcal valve; this was present in 81 cases.

The large intestine was reddened, or had its follicles swollen and congested, in 75 cases. The state of the mesenteric glands was noted 85 times; in 59 there was some alteration in size, colour, and consistence.

The liver, in 84 cases, was congested, deep violet coloured, with white irregular patches on the anterior surface. In one case, the liver was yellow and much enlarged. In three cases, there were perihepatitis and adhesions to the diaphragm.

The spleen, in 34 cases, showed alterations of size, colour, or consistence; in one case it was very soft, in 16 notably enlarged; in 10 the Malpighian bodies were enlarged, in 3 there were cheesy nodules in it, in 1 there was an old cicatrix.

The kidneys were, in 47 cases, deeply congested, violet coloured; the consistence was normal, the size sometimes increased, the capsules easily stripped. In 24 they were soft, yellow, with stellate veins on the surface; the capsules stripped, but tore the renal substance. In 28 they were normal. Out of 42 cases, in which albuminuria was looked for, it was found in 21, of which 12 belonged to the first series, 7 to the second, and in 2 the kidneys were normal; of those free from albuminuria, in 7 the kidneys were of the first, in 3 of the second series, and in 11 normal.

The pericardium often showed ecchymosis, but never any trace of inflammation.

The myocardium always appeared healthy, except in two cases of sepia-coloured blood, in which it had the greyish look peculiar to this condition. The endocardium and valves were always smooth, supple, and healthy. Clots in the heart were very frequent; those on the left side were recent and unimportant; in the right, fibrinous clots were found 41 times, and

partially fibrinous clots 39 times. Sepia coloration of the blood was noted six times; in four cases it was very marked. Robert Saundby, M.D.

DA COSTA ON THE NERVOUS SYMPTOMS OF LITHÆMIA.

Dr. Da Costa, Professor of Medicine at the Jefferson College, Philadelphia, publishes, in the *American Journal of Medical Sciences* for October, an interesting article on the less obvious and less generally recognised nervous symptoms associated with lithiasis or lithæmia. The first and most important of these is vertigo. It is astonishing, he says, how many cases of vertigo turn out on close investigation to be attended by the superabundance of lithic acid lithates in the urine; how persistent are the symptoms; how grave the apprehensions until their true source is discovered, and the treatment directed to it. Cases go on for years, some of them weighed down with the suspicion of organic cerebral mischief; lives are wrecked by the enforced abandonment of accustomed pursuits; the remedies are hurtful rather than helpful until the hidden cause of the malady is discovered, and by steady perseverance removed. Lithæmic vertigo is a giddiness frequently repeated; often there are several attacks daily for a few days, and then there is a much longer interval. It happens irrespective of exertion, although long continued fatigue, especially in reading or writing, or mental worry, may excite it. Anything that aggravates or induces the lithæmic condition developes it promptly. Special articles of food may do so, and in some a few glasses of hock or a single glass of Burgundy or champagne will bring it on to a certainty. The vertigo is objective, not subjective—objects seem to whirl round the sufferer, not he himself to move. The giddiness is not associated with loss of consciousness; at all events the patient does not fall, although he may have to hold on to something for support. From the alarm and distress which attend it, it is difficult to form any idea of its duration, but it may be safely said that it rarely lasts more than a minute. It may come on without warning, or be preceded by a sense of emptiness in the head, by specks floating before the eyes, and dimness of sight. When often repeated, it produces effects on the special senses; sight is less acute, the field of vision is limited in size, letters look blurred, and double vision may occur. The eye or part of one eye may become temporarily blind, and on ophthalmoscopic examination there is detected congestion, especially fulness of the veins. Long continued and frequently repeated attacks may give rise to permanent changes in the disk. The sense of hearing is sometimes impaired for a day or two, and the patient complains of noises in the ears. It seems probable that this vertigo is produced by the impure lithæmic blood. Whether this acts on the vaso-motor nerves, and through them on the cerebral circulation, or primarily on the nerve-centres, remains to be seen.

Headache is not, on the whole, a prominent symptom of lithæmia. A dull feeling in the head, especially frontal, happens at times for a day or two, and severe acute periodic headaches, neuralgic in type, are not uncommon. Neuralgia is a frequent complaint of lithæmic subjects, and there is hardly a nerve in the body that can ache which is exempt from it. Brachial neuralgia, with pain shooting down the fore-arm to the tips of the fingers, intercostal neuralgia, sciatica, and neuralgia of the breast, are all common. A not uncommon form of lithæmic neuralgia is gastralgia.

Cramps in the legs and muscular twitchings are often met with in those suffering from lithæmia. They are apt to come on at night, and are very annoying and painful. They particularly affect the gastrocnemii, and occur more frequently in winter than in summer. Anæsthesia is also a symptom, though not a common one. It is generally confined to an arm or leg or part of the thigh, but it may be met with on corresponding parts of both arms and legs. Sleeplessness, sensitiveness to sounds, susceptibility to odours, and nervousness, are all common accompaniments of the lithæmic condition. The memory is often greatly impaired, and the patient soon becomes incapacitated for mental exertion.

Treatment directed to the lithiasis will soon remove these symptoms and their attendant evils. The indiscriminate use of tonics does much harm. Great attention must be paid to diet, the chief indication being to cut off nitrogenous food. Beef, mutton, cream, fat, and sugar, are forbidden, and the less the patient takes of alcohol the better. Champagne is most injurious, a light claret is least objectionable, but water is the best drink of all. Exercise is most important, and the skin should be stimulated to action either by friction or the Turkish bath. To live constantly in the open air, to take a long mountain tramp, or an ocean journey, are the best prescriptions for those who can comply with them. William Murrell, M.D.

KLEUDGEN ON ALBUMINURIA IN EPILEPSY.

An exhaustive paper by Dr. Kleudgen in the *Archiv für Psych.*, Band xi, Heft 2, bids fair to set at rest the much vexed question as to whether albuminuria is a common result of an epileptic attack. The author has made many preliminary experiments to ascertain the tests for albumen, which are at once the most delicate and the least liable to any source of fallacy. Observations were made upon fifty-seven confirmed epileptics (36 males and 21 females), aged from 13 to 66 years. In women, the urine was always drawn off by catheter. It was found that the urine passed within four hours of an epileptic attack nearly always contained traces of albumen; in only about one-eighth of the cases was it entirely absent. But, pursuing his observations further, Kleudgen found, on examining the urine of these same patients as long as possible after a fit, that quite as large a proportion of the samples contained small amounts of albumen. Further, on testing the urine of a large number of insane patients of various kinds, but not epileptic, it was found that albumen was present in just about the same number of cases. Not content with this, Kleudgen next directed his attention to the urine of healthy adults. In eight cases out of thirty-two attendants upon the insane, he found a small quantity of albumen to be present in the urine.

The author's conclusions are these. There are traces of albumen in all urine which presents a certain degree of concentration (an increased specific gravity). Slight increases in the quantity of albumen may occur periodically without a corresponding rise in the specific gravity, and without the existence of renal disease. The urine secreted after an epileptic

attack does not present any peculiarity, either in reaction or in specific gravity. It is very rare that an attack of epilepsy determines an augmentation of the quantity of albumen in the urine; when this occurs it is only very slight; moreover, in males it is generally due to the presence of semen in the urine. Renal casts are not found in the urine of epileptics unless kidney-disease be present.

Accepting the above results as true, it is easy to trace the origin of the contradictory statements which have been made upon this matter. Those observers who have only used the ordinary methods of testing for albumen, have found none in the urine of those epileptics who were free from renal disease. Others, who have made use of more delicate tests, have found small quantities of albumen almost constantly present; but they have failed to note that this is also the case in the same patients while temporarily free from convulsive attacks, also in insane patients of all kinds, and in a large proportion of healthy adults of both sexes. We may add, that a number of the most careful and exact observers have been ranged upon both sides in the controversy which has been so long continued upon this subject.

C. S. W. COBBOLD, M.D.

STERNBERG ON THE ETIOLOGY OF MALARIAL FEVERS.

DR. GEORGE M. STERNBERG thus concludes his report to the National Board of Health (*Bulletin*, July 23, 1881), giving the results of his experimental investigations regarding the cause of malaria.

A great number of minute algæ, including bacteria of various forms, are found upon the surface of swamp-mud in the vicinity of New Orleans, and also in the gutters within the city limits. Many of these forms may be successfully cultivated in solutions of fish-gelatine (method of Klebs); and this fluid, previously innocuous, acquires pathogenic properties as the result of inoculation with these organisms.

It is evident that the pathogenic properties acquired by gelatine solution and other organic liquids after inoculation with bacterial organisms is due, directly or indirectly, to the presence of these bacteria; for, if they be excluded, such fluids may be kept indefinitely without undergoing change, and are innocuous when injected beneath the skin of a rabbit. Some of the organisms found in swamp-mud, in gutter-water, and in human saliva, are capable of multiplying within the body of a living rabbit, and the fluids and organs containing them (blood, serum from cellular tissue, spleen, etc.) possess virulent properties. In other words, an infectious disease is produced, which may be transmitted from animal to animal by inoculation.

Among the organisms found upon the surface of swamp-mud, near New Orleans, and in the gutters within the city limits, are some which closely resemble and, perhaps, are identical with the *Bacillus malariæ* of Klebs and Tommasi-Crudeli; but there is no satisfactory evidence that these, or any other of the bacterial organisms found in such situations, when injected beneath the skin of a rabbit, give rise to a malarial fever corresponding with the ordinary paludal fevers to which man is subject. The evidence upon which Klebs and Tommasi-Crudeli have based their claim of the discovery of a *Bacillus malariæ* cannot be accepted as sufficient: (*a*) because, in their experiments and in my own, the temperature-curve in the rabbits operated upon has in no case exhibited a marked and distinctive paroxysmal character; (*b*) because healthy rabbits sometimes exhibit diurnal variations of temperature (resulting apparently from changes in the external temperature), as marked as those shown in their charts; (*c*) because changes in the spleen, such as they describe, are not evidence of death from malarial fever, inasmuch as similar changes occur in the spleens of rabbits dead from septicæmia produced by the subcutaneous injection of human saliva;* (*d*) because the presence of dark-coloured pigment in the spleen cannot be taken as evidence of death from malarial fever, inasmuch as this is frequently found in the spleen of septicæmic rabbits (*l. c.*)

While, however, the evidence upon which Klebs and Tommasi-Crudeli have based their claim to a discovery is not satisfactory, and their conclusions are shown not to be well founded, there is nothing in my researches to indicate that the so-called *Bacillus malariæ*, or some other of the minute organisms associated with it, is not the active agent in the causation of malarial fevers in man. On the other hand, there are many circumstances in favour of the hypothesis that the etiology of these fevers is connected, directly or indirectly, with the presence of these organisms or their germs in the air and water of malarial localities. The truth or falsity of this hypothesis can only be settled by extended experimental investigations; and, while further experiments upon animals may lead to more definite results, it seems probable that the *experimentum crucis* must be made upon man himself.

In a disease not of a fatal character, and one for which we have a prompt and reliable remedy, it would seem that subjects for experiment might be found, especially among medical men and medical students, who have always shown themselves ready to subject themselves to inconvenience, or even to danger, in the pursuit of scientific discoveries of value to mankind. The method of conducting such experiments which seems to me to promise the best results is the isolation and cultivation of the various organisms found in malarial localities which may possibly be concerned in the production of malaria, a careful study of the life-histories of these organisms, and an experimental investigation of the physiological action of each when taken into the stomach, or respired in a dry state, by healthy individuals. Such a study, to be of value, will necessarily involve a considerable expenditure of time and money, and requires that the experimenters shall be familiar with the most approved methods of making culture-experiments and with the *technique* of microscopical manipulations with high powers, improved illuminating apparatus, etc.

Another method worthy of trial in connection with this, would be to carefully study the bacterial organisms found in the mouth and alimentary canal of persons suffering from malarial fevers,† as compared

* This statement is based upon observations made subsequently to those recorded in this report. (See special report to National Board of Health. "A fatal form of septicæmia in the rabbit produced by the subcutaneous injection of human saliva."—*Bulletin*, No. 44, April 30, 1881.)

† I do not refer to an examination of the blood, as a careful search in a considerable number of cases with a Zeiss's one-eighteenth-inch objective has failed to demonstrate the presence of any organisms in the blood of patients suffering from pronounced malarial fever. The absence of "germs" from the blood does not, however, settle the question against the supposition that these fevers are parasitic germ diseases, as the pathogenic organism may find a congenial habitat in the alimentary canal, in the lymphatics or elsewhere, and may not thrive in the blood stream itself. In the fatal form of septicæmia which I have recently investigated, the micrococcus multiplies abundantly in the subcutaneous connective tissue from the moment that it is intro-

with the common forms constantly found in the same situations in healthy individuals, with reference to the determination of the presence of unusual forms or of an abnormal abundance of common forms, or of possible physiological varieties of these forms not possessing morphological peculiarities.

Finally, I may say that I entered upon this investigation without prejudice, but hoping that I might be able to confirm the conclusions of Klebs and Tommasi-Crudeli, whose researches were evidently prompted by a truly scientific spirit, and were conducted in accordance with strictly scientific methods. I believe that their work will prove useful in many ways to future explorers in this field, and have an abiding faith that light will eventually be shed upon this and similar problems by the persistent and intelligent application of the experimental method supported by all the resources of modern science.

GIBSON ON THE ETIOLOGY OF CARDIAC VALVULAR LESIONS.*

Recent observations on the pathogenesis of cardiac and vascular diseases have thrown some new light upon the nature, if not upon the absolute causation, of such processes. These are of interest, not only to the pathologist, but also to the physician, and it is our present purpose to bring together certain facts bearing upon the origin of these changes.

In the following remarks, only organic disease of the valves will be dealt with. Relative incompetence of the valvular mechanism does not enter within the scope of the present article, and may be dismissed in a word. Any state inducing deficient nutrition of the cardiac muscle, either absolutely or in relation to the amount of work to be performed, will produce in the end incompetence by dilatation of the orifices. All febrile conditions, and every instance of anæmia, bear witness to the fact, and it is now so universally admitted that no further notice of it is required.

Turning to lesions of the valves, it will be well to take up the various changes *seriatim*, but giving necessarily very unequal attention to the different forms of disease. Rokitansky gives the following classification of valvular diseases:—1. Defective and excessive formation; 2. Hypertrophy and atrophy; 3. Anomalies of form; 4. Anomalies of consistence; 5. Separations of continuity; 6. Diseases of texture; (*a.*) Inflammation; (*b.*) Adventitious structures.

This classification has the merit of extreme conciseness, but it does not include all our knowledge of valvular disease, and therefore we shall not adhere to it, but discuss the subject according to the annexed order:—1. Diseases of valves: 1. Malformations; 2. New formations; 3. Hæmorrhages; 4. Degenerations; 5. Inflammations. II. Injuries of valves.

The great storehouse of information regarding malformations of the valves, as well as of the heart generally, is still to be found in the writings of Peacock. To the facts which he has made known, nothing has to be added. The number of valve-segments may be excessive, apparently by failure of union of the component parts; or they may be too few, from the junction of two or more segments along their adjacent edges. Sometimes all the segments are thus united, leaving but a small orifice. In any such case of union, there is usually evidence of it in the form of a more or less evident ridge, marking the place of fusion. Whether such cases are caused by perverted development, or by intra-uterine endocarditis, is of small moment; the undoubted fact remains that they are congenital. Those cases in which the valve-segments are too numerous, cannot be caused otherwise than by arrest of development.

During recent years, a considerable amount of information has been obtained on the subject of new formations. This has been embodied in an admirable paper by Garel, which lately appeared. He points out that a large number of intracardiac tumours have been placed on record, especially by Choisy, Aran, and Caron, but that these have not yet found their way into the pathological text-books. The vast majority of these tumours belonged to the left side of the heart. Burns described a tumour of the right side of the heart, but it was attached to the interior of the auricle, and, although it projected into the ventricle, had no connection with the valvular mechanism. The same remark applies to Gairdner's case of pediculated tumour of the right auricle—a case most interesting on account of tricuspid stenosis having been diagnosed ten years before the patient's death. Pigué, quoted by Garel, placed on record an instance of small tumours of the tricuspid valve; and Debove, also referred to by Garel, described a case of myxoma of the tricuspid valve. These instances sum up the amount of our experience of non-inflammatory new formations affecting the right side of the heart; but, as already remarked, such tumours are relatively common on the other side of that organ.

In Rokitansky's work, the adventitious structures mentioned are said to be 'almost entirely limited to the occurrence of fibroid tissue and anomalous osseous substance', and these are described as being caused by hypertrophy or inflammation, with secondary changes in the products so arising. 'Atheromatous disintegration of newly deposited endocardium' is also included under the same head, which finally also embraces carcinomatous vegetations. Not a word is given to new formations independent of inflammation and diathetic conditions in this or in any other text-book; but enough has been said in this article to show that, although thus ignored by authors, they are not unknown to pathologists.

An entirely new chapter on the subject of valvular lesions has just been written. When prosecuting an inquiry into the relative resistance of the cardiac orifices and valves, the author of this article stumbled last year upon a small tumour attached to the tricuspid valve of a sheep's heart. It projected from the auricular surface, was of a purple hue, and had the size of a small pea. On microscopic investigation, it was found to be a blood-clot occupying the fibrous structure of the valve. It was quite free from the least trace of inflammation, the endocardium being perfectly healthy, and the fibrous tissue entirely destitute of any inflammatory products. The examination showed a cross section of the small vessel from which the hæmorrhage had proceeded, and also demonstrated that the clot was undergoing a fibrous transformation. Taken by itself, this instance would be of comparatively small value, but its publication was speedily followed by a

duced by injection, but it does not enter the blood until the case is near a fatal termination. Pasteur has found the same to be the case in a form of septicæmia studied by him in which the pathogenic organism is a long and slender vibrio.

* *The Birmingham Medical Review*, October 1880.

case of much interest. Garel, in the excellent paper already referred to, has recorded the case of a man whose tricuspid valve was the seat of a similar extravasation, causing a large projection from the surface of the valve. The tumour was of mushroom form, and was associated with some vegetations, so that there may have been an inflammatory affection involving one of the vessels of the valve. Whether spontaneous or caused by erosion of the vascular walls, there can be no question regarding the nature of the tumour. The minute account of the microscopic appearances given by Chandelux proves that it was composed of coloured blood-corpuscles undergoing a fibroid change, and giving indications finally of calcareous infiltration. In the words of Garel, 'de ce qui précède, nous croyons pouvoir conclure, avec M. Chandelux, qu'il s'agit d'un épanchement sanguin formé dans l'épaisseur des lames valvulaires et subissant les transformations successives qui doivent aboutir à la production de tissu fibreux. Cette tumeur offrant déjà, de distance en distance, des îlots d'infiltration calcaire, nous avons cru devoir la désigner sous le nom *d'hématome valvulaire en voie de calcification et de transformation fibreuse*.'

These two observations open up a new field of inquiry: but it would at present be premature to suggest that intravalvular hæmorrhage may be the starting point of other diseases of the valves. It is, however, quite possible that such may be the case, and further investigations on the subject are required.

As regards the causation of such extravasations, it appears probable that when the valves are subjected to any very severe strain from excessive cardiac action, there will be a tendency to rupture of their vessels, a tendency no doubt kept in check by the density of the fibrous texture surrounding them, but which will at once have full play if, by extreme tension, there should be any weakening of the elasticity of the valves. It must be admitted, nevertheless, as somewhat inexplicable, that both these cases were extravasations into the tissue of the tricuspid valve, which readily yields to an excess of pressure in the pulmonary circulation; and we must wait for future observations.

In the next place, degenerations must be considered; and here we must bring in atheroma, instead of leaving it among the new formations. The subject of atheroma has been so well thrashed, that but small room seemed left for a new labourer; and yet the most recent contributions to this branch of pathology may be said to go beyond all that has hitherto been written on it. In a recent paper, Martin brings forward some new facts of much interest. It is not necessary here to pass in review the various opinions which have been expressed regarding the atheromatous process; it need only be remarked in passing, that two views have been advanced as to the initial stage of the morbid change. The first of these regards the process as being of inflammatory origin, the products of inflammation ultimately undergoing fatty degeneration; and the second considers the change as being from the first a degeneration. In no work dealing with the question, does the causation of the lesion receive consideration.

Martin adopts the view expressed by Cornil and Ranvier, that the first stage is quite passive, and that, in the commencement of the process, the internal tunic exhibits a collection of fat-globules, amongst which may be seen vestiges of nuclei recognisable by their coloration on staining with carmine. To this first period there succeeds a stage of chronic inflammation, according to these authors, set up by irritation through the contiguity of the necrosed part. This opinion is also espoused by Martin.

He begins by considering the relation of cirrhosed viscera to the circulatory apparatus in old age, or chronic alcoholism, where great vascular changes are present; points out that the inner tunic, not only of the arteries, but of the arterioles, and even of the capillaries, is the seat of great hyperplasia; and urges that the visceral changes are consequent upon the vascular thickening, which greatly interferes with the circulation. In a similar way he believes atheroma to be caused.

Little attention has been given to the *tunica externa* by the majority of authors, and thus the immediate cause of atheroma has been left unexplained. It reveals a notable fact. By the deeper aspect of this tunic the nutritive arterioles of the wall of the vessel enter. They are always healthy, with the exception of those which correspond to the atheromatous patch. Opposite that area the nutritive arteriole belonging to it presents proliferating endarteritis, which frequently obliterates the entire lumen of the vessel.

Martin states that this fibrous endarteritis is always present in atheroma, and gives a drawing taken from a case. It seems difficult to contest, as he remarks, the relationship as to cause and effect between the endarteritis and the atheroma in the face of the evidence in support of it; and we are inclined to agree with him in regarding atheroma 'qu'une simple nécrobiose par insuffisance vasculaire'.

It is true that Martin's observations were not made upon the valves of the heart, and therefore do not apply directly to the matter immediately in hand; but, if atheroma of the arterial walls be always caused in this way, it must, beyond all question, arise in a similar manner when it affects the valves. No doubt fatty degeneration of the products of inflammation does occur, but it would be well for the future to separate such a secondary degeneration from primary atheroma.

Amongst inflammatory diseases of valve-texture Rokitansky gives, 1. Redness, 2. Opacity, 3. Softening, 4. Exudations in valves, and 5. Vegetations on valves. The terminations of inflammation of the valves, according to the same writer, are, 1. Thickening, 2. Shrivelling, 3. Adhesion, and 4. Concretion; to which he appends Aneurism of valves. Our business with those changes at present is to investigate their causes.

At the outset, we are confronted by the rheumatic origin of endocardial inflammation. It is an undoubted fact that rheumatism is the most prolific source of such inflammation, but the relative proportion of cardiac to rheumatic affections is uncertain. Thus Bouillaud, quoted by Pierson, states that 80 per cent. of cases of acute rheumatism are complicated by endocarditis. Latham gives a ratio not quite so high; for, on adding up his figures, we find that 54.40 per cent. of his patients who suffered from acute rheumatism had as a sequel inflammation of the endocardium. Fuller, quoted by Hayden, states that, of 379 cases of acute and subacute rheumatism admitted into St. George's Hospital, 174, or 45.91 per cent., suffered from endocardial mischief. On the other hand, Bamberger, also quoted by Hayden, found endocardial affections in only about

20 per cent. of cases of articular rheumatism. Latham says it was suggested to him that perhaps his clinical clerks had brought together more than the usual proportion of 'interesting cases', which might account for the frequency of endocarditis; and Fuller admits that there could be no doubt that many of his cases had only a murmur of relaxation, such as would of necessity arise in any other febrile condition. We are certainly inclined to regard Bamberger's statement as much nearer the mark than either of the other authors. Even it shows the frequency of endocardial sequels to rheumatic attacks.

From the converse of such observations much is to be learned. The writer has recently analysed his cases of valvular disease, in order to discover the relative frequency of the rheumatic origin of cardiac lesions, and the results may be referred to in this place. The total number of cases was 134, of which 51 had personally suffered from rheumatism in some form, and 7 were of rheumatic families; in all, 58 patients had a history of rheumatism. Of the remainder, 34 had a distinct history of entire freedom from rheumatic taint, and 42 had no distinct history at all. Leaving the cases whose history was not attainable out of account, there were 92 patients, 58 of whom, or 63.05 per cent., were rheumatic, and 34, or 36.95 per cent., non-rheumatic.

There is little doubt that exanthematic diseases play a very important part in the production of valvular disease. First in importance amongst these is scarlatina. Thus Hayden says, 'amongst the hæmic causes of disease of the heart, I regard the poison of scarlatina as next to rheumatism in frequency, and perhaps superior to it in potency. It attacks the endocardium by preference, seldom engaging the pericardium, and more frequently the mitral than the aortic valve.' Measles and small-pox likewise frequently induce cardiac mischief, but by no means so often as scarlatina. Septicæmia, it is well known, is commonly complicated by the co-existence of endocarditis especially implicating the valves; and many other blood-diseases are also important but less frequent factors in the causation of valvular diseases, and in this connection the lithic acid diathesis and alcoholism should be considered.

All these causes operate by means of irritant principles contained in the blood. Their action is probably twofold. In the first place the whole organism is in a condition of enfeebled resistance and imperfect nutrition, a state in which the heart must share, and therefore be liable to morbid changes on excitation. Further, the parts directly exposed to the deleterious influence of the vitiated blood are chemically or mechanically irritated by them and become inflamed. Moreover, in alcoholism at least another factor is always introduced. This is excessive action of the heart, involving an extra strain on the valves. It does not seem to us that simple malnutrition has been proved in any case to be a cause *per se* of valvular disease, except in conjunction with this last mentioned factor, strain on the valves. We shall, therefore, glance next at it.

The aortic valves very frequently suffer in men who are engaged in occupations requiring great muscular effort, especially when this is associated with compression of the chest, much additional strain being in this way thrown upon the systemic valves. On this subject, Allbutt's views command in the main our unqualified assent. Such cases are of frequent occurrence in those districts where the major operations of the iron and similar trades are carried on. In this place we may recall the observation of Adams, that the valves of the left side of the heart suffer, on account of their more perfect closure, infinitely more than those of the right side, which yield to exaggerated pressure, and therefore escape many evils.

Bright's disease in its chronic form is in a large proportion of cases accompanied by cardiac changes. The hypertrophy is no doubt due to arterial and capillary resistance, but the valvular lesions are probably in part due to the changes in the blood, which must induce a certain amount of malnutrition of the valves. According to Roberts, of 406 necropsies of renal disease, 54 showed valvular disease, that is 13.30 per cent. This we regard then as one disease which induces valvular lesions, partly by interference with nutrition, and partly by increased strain on the valves. Anæmia must be placed in the same category. This affection not infrequently induces valvular disease as a sequel to its other cardiac phenomena. Probably, in some quarters, this statement will be received with incredulity; nevertheless, we are positive on the point. In this belief we are strengthened by the opinion of Goodhart to the same purpose, but we differ from him somewhat in the interpretation of its causation. In his own words, Goodhart thus gives his view as to the anæmic origin of valvular disease. 'Anæmia leads to fatty changes in the heart. Fatty changes in the heart favour dilatation of the left ventricle. Dilatation of the left ventricle disarranges the coaptation of the mitral flaps, and mitral regurgitation results, the so-called curable regurgitation. But if this regurgitation is prolonged for any length of time, or is frequently repeated, as is not unusually the case in many instances of chlorosis, surely from the passage of blood in two directions instead of one, and particularly when the backward stream is such a twisted and rough stream, if I may use such a term, of fluid, as is the regurgitant mitral stream, there must be a considerable increase of friction or wear and tear to the valve, and chronic disease of the tissue of the valve is started, which by and by—it may be years after the original cause had ceased—leads to permanent thickening and disease of the valve.'

It seems to us that a better explanation of the occurrence of valvular disease in anæmia lies in the two facts, that in this affection there is impairment of nutrition, and therefore a proneness to changes in all organs; and further, that in addition there is increased resistance to the circulation from a lowering of the *vis a fronte*. When the blood is not supplied with the material required by any particular tissue, that tissue exerts less power of attraction for the blood. The diminution of the attractive force of the tissues in anæmia has recently been insisted on by James, in a paper lately read, but not yet published. It seems highly probable that it greatly assists the malnutrition in causing valvular lesions. This subject would be far from complete, if no mention were made of heredity in connection with valvular disease. Recently, two observers have brought forward facts in support of a transmission of tendencies to valvular lesions from parent to child. Leube puts before us very clearly the intimate relationship which rheumatism, chorea, and organic cardiac affections bear to each other; while Pierson brings forward a series of cases in which he observed the inheritance by children of the parent's predisposition to valvular disease. The latter author quotes Wunderlich's opinion that the older physicians gave

too much weight to such a heredity, and the new attribute too little importance to it.

It seems to us that many of the cases of valvular disease apparently arising from anæmia really spring from some inherited tendency; for, in our experience, it has been a common observation that two or more sisters have suffered from the same insidiously developed cardiac trouble. In almost all of these anæmic patients, the mitral valve was the one affected. Several of these seemed to be free from any rheumatic taint, but in many of those from whom no definite history, except as regards themselves, could be obtained, it is at least possible that there may have been a family history of rheumatism, or of endocarditis, which, as Friedreich says, may be regarded as a sort of rheumatism.

Taking leave now of the diseases of valves, we have lastly to consider their injuries. From Harvey's time, ruptures of the cardiac substance have often been placed on record, but, so late as the days of Haller, no injuries of the valves were known. In an extensive and comprehensive memoir which has only lately come out, Barié places these facts before us, and gives a brief *résumé* of all the published instances of valvular rupture, to which he adds seven unrecorded cases. He shows that the earliest trustworthy observations are those of Corvisart, and cites in succession the experiences of Bertin, Laënnec, Bouillaud, Henderson, Aran, Peacock, and Foster; after which he analyses the cases, and finally describes a series of experiments on the mode of production of valvular ruptures. He divides these injuries into two classes—the spontaneous, caused by effort on the part of the patient; and the traumatic, in which the injury arose from an external agency.

The total number of cases is 38. Of these, 19 affected the aortic valves, 10 of which were spontaneous, and 9 traumatic. In 11 of the aortic cases necropsies were obtained, and it was found that 6 had rupture of two valve-segments, while 3 had but one segment injured. The segment most frequently damaged was the right or that next the interventricular septum. The mitral apparatus suffered in 16 cases, of which 13 were spontaneous, and 3 traumatic. Necropsies were performed in 15 of these instances; 9 showed rupture of the tendinous attachments of the valves, 5 laceration of the muscular columns, and 1 injury both to chordæ and to columnæ. In no case was there any damage to the valves themselves. There are three cases of injury to the tricuspid apparatus, 2 spontaneous and 1 traumatic. In these cases, once a valve was damaged, once the fleshy columns were torn, and once also the tendinous attachments gave way. Now in the whole series it is quite evident that spontaneous rupture is more frequent than traumatic, their numerical relationship to each other being 25:14. The causation of the spontaneous ruptures was found in great muscular efforts at work, the strain of a bad cough, or frantic attempts at respiration when suffocation was imminent. The traumatic ruptures were partly due to direct, and partly to indirect violence.

Barié has given considerable attention to the pathogenesis of these ruptures, and thinks that the surest key to their solution lies in a study of the physiological mechanism of violent efforts. Right-sided rupture is brought about in this way; every effort raises the pressure in the pulmonary circulation, and therefore increases that of the right cardiac cavities. If at that time any violent strain, such as coughing, be induced, and simultaneously ventricular systole occur, the tricuspid valve may gave way. To us it seems that there must be some tricuspid peculiarity before rupture could occur, as the usual course is that free regurgitation sets in when the pulmonary pressure rises; it is, however, quite credible that the tension of the whole thorax in certain rare instances may keep the heart from any excentric yielding. The valves of the left side are believed by Barié to undergo rupture by means of augmented pressure, due partly to peripheral resistance, and partly to increased tension on the thoracic and abdominal aorta during great effort. He thinks that traumatic rupture of the tricuspid and mitral apparatus occurs during the diastolic period, just when the ventricles are nearly or quite full, and before the sigmoid valves can open to the sudden and great increase of pressure. In the same way, he considers that rupture of the aortic segments must be caused during diastole also, when the aorta is fully distended, and no escape can be found save by an abnormal channel.

Experimentally, Barié found that it was impossible to cause rupture of the pulmonary valves, and the same may be said of the tricuspid; for the only instance of injury which he was able to produce occurred in the case of a woman, aged 79, who died in the last stage of cancerous cachexia. The mitral valve was difficult to rupture; the easiest of all being the aortic. In this last it is interesting to note that the segment which most frequently yielded was the right, or that of the interventricular septum.*

KNOTT AND WALSHAM ON ABNORMALITIES IN HUMAN MYOLOGY.

MR. KNOTT's paper (read before the Royal Irish Academy, April 1881) is a record of observations made during four winter sessions in the school of the Royal College of Surgeons of Ireland, to which the author is demonstrator. It includes anomalies of muscles in every part of the body, and, together with 'Anatomical Variations' (Walsham, *St. Bartholomew's Hospital Reports*, Vol. xvi, 1880), the result of work occupying a similar or rather longer period, and appearing almost simultaneously, will be an useful store of reference, which anatomists must not allow to fall into oblivion. The homologies of the upper and lower extremities constitute one of the most intricate questions of morphology, the solution of which has hitherto been looked on as among the special amusements of a few very learned anatomists. Until more

* Rokitansky. *A Manual of Pathological Anatomy*, Sydenham Society's Translation, vol. iv pp. 229-232. 1850.—Peacock. *On Malformations, etc., of the Human Heart*, p. 93-107. 1858; and on some of the causes and effects of Valvular Disease of the Heart, p. 2-33. 1865.—Garel. *Revue Mensuelle de Médecine et de Chirurgie*, tome iv, pp. 864-874. 1880.—Burns. *Observations on some of the most frequent and important Diseases of the Heart*, pp. 194-197. 1809.—Gairdner. *Clinical Medicine*, pp. 602, 603. 1862. Specimen demonstrated at the Meeting of the British Medical Association, 1873.—Gibson. *Journal of Anatomy and Physiology*, vol. xiv, pp. 413-415.—Martin. *Revue de Médecine*, tome i, pp. 32-37. 1881.—Latham. *Lectures on subjects connected with Clinical Medicine, comprising Diseases of the Heart*, vol. i, pp. 143-145. 1845.—Hayden. *The Diseases of the Heart and of the Aorta*, pp. 303-324. 1875.—Gibson. *Birmingham Medical Review*, vol. x. 1881.—Abbott. *St. George's Hospital Reports*, vol. v, pp. 23-53. 1870. And *Transactions of the Clinical Society of London*, vol. vi, pp. 101-113. 1873.—Adams. *Dublin Hospital Reports*, vol. iv, pp. 353-453.—Roberts. *A Practical Treatise on Urinary and Renal Diseases*, 3rd edit., p. 413. 1876.—Goodhart *Lancet*, vol. i, pp. 479-482. 1880 Leube. *Deutsches Archiv für klinische Medicin.*, Band xxv s. 242-258. 1880.—Pierson. *Separat-Abdruck aus dem Jahresberichte der Gesellschaft für Natur- und Heilkunde in Dresden.* 1880-1881.—Friedreich. *Handbuch der speciellen Pathologie und Therapie*. Band v, Abth. ii, s. 207. 1867.—Barié. *Revue de Médecine*, vol. i, pp. 132-144, 307-332, 482-492. 1881.

facts concerning the muscles of the extremities are known, the arm and leg can never be studied from a developmental point of view, in so satisfactory a manner as the cranium, or even the pelvic and shoulder girdles. Mr. Knott furnishes us with a collection of such facts. As his monograph, if we can apply this familiar scientific expression to a work that includes so much, gives details of 155 abnormal muscles and variations in normal muscles, we can only notice a few points of interest. It will be convenient to compare Mr. Knott's conclusions with those of Mr. Walsham, since the latter is the author of the most recent paper on the subject next to that now under consideration, and both anatomists have freely quoted earlier authorities.

Masseter.—Mr. Knott has examined thirty subjects to find the bursa described by Monro as lying between the two parts of this muscle, but without success. He has met with several examples of Hyrtl's bursa, which lies between the muscle and the capsule of the temporo-maxillary articulation.

Sterno-cleido-mastoideus.—In eleven examples, it was found to be entirely divided into sterno-mastoid and cleido-mastoid. In five cases, the outer edge of the sternal head gave origin to an accessory tendon of the pectoralis major.

Omo-hyoid.—This muscle has been the subject of considerable attention. Mr. Knott, in four years, has found seven cases of the origin of the posterior belly from the coracoid process. In one, it arose from the acromion process. In none was its origin traced to any part of the first rib. In two, this muscle arose from the clavicle alone. Walsham calls this a very common abnormality; both find, in this case, that the intermediate tendon is reduced to a mere intersection. In two cases, the anterior belly was observed to be double; on the other hand, Walsham found the posterior belly double in one subject.

The intrinsic and external muscles of the larynx have been found subject to numerous anomalies, described at length by Mr. Knott. Want of space forbids our discussing either these abnormalities or those of the muscles of the neck. Both Knott and Walsham have found a levator claviculæ, the former recording two cases where it was attached superiorly to the transverse process of the sixth cervical vertebra (*cleido-cervicalis imus*), one where the attachment was to the axis (*cleido-epistropheus*), and one where the muscle broke into slips inserted into the articular processes of the third, fourth, and fifth cervical vertebræ. Walsham has found one instance of its attachment to the atlas (*cleido-atlanticus*); but in this case its lower attachment was much nearer the sternal end of the clavicle than usual.

Mr. Knott has examined, with great care, the anomalies of the biceps brachii, and the innumerable variations in the flexor and extensor muscles of the fingers. He has found one instance of an extensor brevis digitorum manûs; it arose from the bases of the second and third metacarpal bones, and took some fibres from the adjacent part of the posterior annular ligament, giving off two tendons which joined the long extensor tendons of the index and middle fingers. Mr. Walsham also describes one case of the existence of this muscle, arising from the dorsal ligament of the carpus and inserted into the tendon of the extensor communis digitorum to the index finger. Mr. Knott has found instances of a third head of the gastrocnemius, arising from the popliteal surface of the femur, and five of accessory fibres of the outer head arising from the external lateral ligament of the knee-joint.

Alban Doran.

COLOUR-HEARING.*

He who has never heard the expression 'colour-hearing', will hardly find his curiosity satisfied if he look for it in a dictionary, for it is a newly formed word, which may be employed to describe a peculiar phenomenon (whether psychological or physiological cannot as yet be determined), and to an illustration of which the following may contribute.

As a rule, we do not hear colours, since they make an impression only upon the sense of sight. Nevertheless, it is possible to hear colours. Nussbaumer was the first who, in an article published in the *Wiener Med. Woch.* of 1873, stated that, in his experience, hearing of musical notes, articulate sounds, and noises of any kind, were always accompanied by an appearance of light and colours, in such a manner that each special note seemed to be connected with a special colour. These observations he made while still a youth, and corroborated them by a similar talent possessed by an older brother; for in their mutual play with 'bells' (spoons and forks suspended by a thread, and which by striking were caused to clink), they detailed to one another the observation of colours caused by the hearing of sounds, these experiments being a great source of amusement to them. Nussbaumer described this unusual state of affairs, namely, a single sense, hearing, possessing the functions of two. But not knowing of another case of colour-hearing besides himself and his brother, whose perception of colours coincided in substance with his own, this peculiar talent would have been looked upon as unique, had not lately a large number of investigations, accurately pursued, established the fact of its wider distribution. A student of medicine at Zurich, not acquainted with the published account of Nussbaumer, stated in a circle of acquaintances, that while hearing he perceived colours, and this gave an impulse to further investigations. The 'colour-hearer', Bleuler, associated with himself a colleague, Lehman, who only heard a tone, and was hence not possessed of the 'Doppelwahrnehmung' (double perception). Lately, they published the result of their investigations and observations in regard to themselves and a large number of well-known individuals. By these researches, the communications of Nussbaumer were verified in all their details, and explained more extensively.

They explain the sensation as follows. The perception of musical notes is connected with the observation of certain colours, which differ, however, in character in different individuals. As a general rule, the higher notes are accompanied by lighter colours, the deeper, in their turn, by corresponding darker colours. Chords either cause the colours which correspond to the different notes (of the chord) to appear side by side, or a result obtained from a mixture of these colours. In one case, a certain scale, so arranged that the key could be recognised, was followed by the perception of only one colour. This individual, who is moreover a thorough musician, perceives with each key a distinct colour; for example: C major, grey; G flat major, reddish-brown; A major, blue; A minor, lead

* *Medicinische Neuigkeiten*, and *Cincinnati Lancet.*

colour; F sharp major, yellow, etc. The key in sharp is always lighter, and the key in flat darker, than the key in natural. Within a key itself the notes appear of the same colour, but the same note, in different keys, changes in colour according to the colour of the key in which it is found; thus, a note which is a part of the cord in D major is yellow, while the same note as a part of a chord in C major appears grey. A piece of music appears to this individual of an orange colour as long as it is composed in F major, but changes its colour as soon as there is a transition into another key. To many persons, the same piece, played by different instruments, appears also in different colours. The same individuals who perceive colours while hearing musical notes also observe these accompanying noises; these are generally of a grey or brown hue. The intensity of the sound in a noise has more influence upon the colour than in musical notes; since, in the latter, the greater the intensity, the more intense is also the colour, which, however, retains its hue; while, in the former, it takes away to a great extent the transparency, giving place to a more opaque appearance. 'A hissing noise', is said, by way of explanation, 'presents, if slight, an image of light grey vapour, evenly distributed'; but should the noise assume a very loud character, the colour of the image may be compared rather to a mass of rough silver.' As an answer to the question, where the colours observed appear to be localised, the investigators express as their opinion, that 'the colour images are projected outward, but not analogous to a hallucination into the field of vision, but into the auditory field'. The examples, however, which are offered as a proof of this assertion, directly contradict it. For, when they say that, a guitar being employed, the tone and colour-image surround the strings which are touched, or when they represent the colours of tones emitted by the piano as arising somewhat behind the keys of the instrument, the exhibition of colours is surely not in the auditory field.

The result of sounds produced by speaking is similar to that from musical notes and noises. Vowels, as musical notes, summon forth the intense colours; consonants, as noises, the different shades of grey and brown. As a result of the investigations it has been shown that, as a rule, those individuals who connect colours with musical notes, combine them also with musical sounds; in fact, the number of those who possess the latter power is greater than of those who possess the former. Yet here, also, they agree only in one regard, namely, that the higher vowels, *i* and *e*, are accompanied by the lightest colours; *u*, as the deepest vowel, by the darkest colours; *a* and *o*, as middle vowels, by the intermediate colour. The separate colours are not distributed alike by all persons among the different vowels. A synopsis shows that *i* produces, as a general rule, white; *e*, yellow; *a*, dark blue or black; *o*, red, yellow, orange, etc.; and *u*, black. Whoever should so be disposed, could very easily assume that the vowels occurring in the name of the colour exercised some influence, so that, perhaps, *e* should appear yellow, because *gelb* (yellow) has *e* for its vowel. This assumption finds further support in the fact that in the German, as spoken in Switzerland, which dialect was to a great extent current among those upon whom the tests were made, the diphthongs of the high German names of colours are displaced by long vowels; viz: 'wiss' instead of 'weiss' (white); 'brun' instead of 'braun' (brown); and hence it would be very natural to appoint white as the colour of *i* (which occurs both in 'wiss' and 'weiss'). The two investigators, however, protest against the exclusive acceptation of this view, which can certainly not explain directly all the phenomenon; hence, let this so plausible a criticism be treated only as a suggestion for the present. Diphthongs frequently only produce one colour, a mixed one. This mixture results, with hearing, more rarely with the orthography as a basis; for example, *eu* is green; *e* would be white; *u* red; that is, the colours of the separate vowels do not unite to form 'gruen' (green), while, on the other hand, the vowels *u* and *e* (eu) combined, are found as the vowel of 'gruen'. *Oe* is dark green, *ei* light green, and *ue* violet. In singing, colours are produced, both according to the vowels and pitch of notes. Words act in a similar manner. They give either a band of various colours, which correspond to those of sounds placed side by side, or a mixed colour. The colours of the vowels, however, preponderate when compared with those of the consonants. Names of persons, months, days, and numbers, frequently create a combined perception of colours and sounds in persons who otherwise do not possess this faculty. But the authors themselves are compelled to grant that, in this case, frequently, direct 'association' is evidently a cause. Sentences and discourses generally appear grey and brown in colour mixtures. Probably a still more interesting fact, which corresponds to the phenomena hitherto considered, but which has been observed only in four persons, is the production of sound as a result of sensations of light and colour. Let the following act as an illustration. The sound perceived, as it is produced by a broad quietly burning gas-flame, may be constructed of a *u* and a light vowel, the latter approaching nearest to *e*. Should the flame be caused to flicker slightly by a draught of air, the noise will grow similar to *i*; vibrating still more rapidly it assumes a character which might be called blowing. May not association in this instance also be considered plausible?

Remember the hissing noise that caused a colour similar to vapour, which condensed itself into rough silver whenever the sound grew more intense. Colours are observed similarly combined with the impressions received by the sense of smell and taste, as well as with those received by the sense of touch; but here, also, association may be suspected. To offer only one illustration: An individual who was inhaling the odour of an acacia in full bloom, upon being asked what the character of the scent was, remarked: 'It is only a green sort of odour.' Let one conceive this association fixed, and the phenomena are explained. Let, from youth on, each sound be compared to a certain colour (in consequence of the varying excitability of the senses, especially of sight); then without doubt a certain fixation will at length take place, which talent may even be inherited. Hence, the investigators appear over-zealous when they do not admit association as an explanation of definite phenomena, because they observed also less constant associations, which encroached upon this view, but which could perhaps be neglected. A connection in this double perception has been found constant in all cases examined. Invariably the same primary (original) sensation was followed by the same secondary (accompanying) sensation in the same individual; but the combination did not occur alike in different individuals. The organ of secondary perception was never influenced; for example, nothing could be perceived in the eye

when a sound excited colour; at least, the authors say so. A little doubt must here be allowed. The sense, which was acted upon secondarily, must have been influenced in some manner, since we know by experience that each sense possesses a specific energy. Here, also, criticism is compelled to reproach the experimenters for speaking of secondary observations of impressions received without proving them to be such. The question might be justly asked, why in the report submitted the neutral word 'Wahrnehmung' (perception) was purposely used instead of 'imagination', which would perhaps be a more warrantable term? The same consideration also leads us to a correction of the authors' idea that the secondary observation, or perception, is localised within the field of that sense upon which the impression was primarily made. All arguments brought forward by the authors against the explanation by means of association are proven to be fallacious by the important established fact that the phenomenon under consideration is to a great degree hereditary, in such a manner that either all members of a family or not one of them possess this 'doppelwahruehmung'. No essential difference between the two sexes has been demonstrated. Of seventy-six serviceable persons, 59 per cent. were male, and 41 per cent. were females. The serviceable ones, again, represent only a small proportion of those examined: 12.5 per cent. of 596 individuals who were placed at the disposition of the authors. Since the number is so small a fraction, this peculiar state must be considered pathological. It cannot be called disease, as it occurs without any direct disturbance of the organism; yet it may be concluded that there probably exist anomalies of various kinds caused by a predominant sensibility of the secondary function. As far as this is concerned, Bruehl correctly refers it to an error of the mind, although this reference does not exhaust all the results, and, on the other hand, the least number of results may be traced to errors of the mind. This subject, moreover, offers to the psychologist substance for manifold suggestions, since it has already attracted considerable attention.

GRASSET AND AMBLARD ON EMETINE AND ATROPINE: THEIR ACTION CONTRASTED.

NOTWITHSTANDING the increasing interest which now attaches to this kind of research, M. Mollière observes (*Lyon Méd.*, p. 421), that nothing, or nearly nothing, has been done up to the present time on the comparative action of emetine and atropine on the heart and circulation. Podwyssotzki has touched the question in pointing out that emetine arrests the heart in diastole, and that neither mechanical excitation nor atropine can arouse again its extinct contraction.

To appreciate accurately the reciprocal action of a few alkaloids in the presence of each other, or in other words, the antagonism which was previously necessary to ascertain the separate action of each, it was necessary, as a preliminary, to know them well separately. In 1862, Pecholier first demonstrated the very marked action of emetine on the cardiac contractions, of which it first diminished the intensity, and in the end completely stopped them. Some years later, Dyce Duckworth showed that large doses of emetine injected under the skin, or into the veins, produced cardiac paralysis; the blood-pressure, which was but little modified by small doses of the alkaloid, suddenly fell a few moments before death. In the opinion of Ornellas, as well of Podwyssotzki, the capital fact of poisoning by emetine consists in this gradual diminution of the cardiac contractions, commencing by the auricles, and finishing by the ventricle, which is stopped in diastole. Thus it is difficult for them to say whether the paralysis of the heart is due to an indirect action on the nervous ganglia, or on the muscular fibre itself.

M. Grasset seeks to elucidate the question by employing in turn the hypodermic method and the direct applications of the poison to the heart. What is most interesting in the effects of emetine, is the course of the slackening. Sometimes the outset of the poisoning is marked by a temporary acceleration; but whether this phase exist or not, a progressive slackening soon occurs.

The principal phenomena which these experiments show is the very rapid fall which emetine produces in the number of pulsations, which are lessened by half, and do not sensibly vary up to the end. This fall may be produced by doses, which vary according to the animals. The dicrotism of the systole and of the diastole must be noted, as well as the character of the contractions, without reference to the number of pulsations. As concerns atropine, M. Grasset has naturally aimed at the immediate effects of moderate doses, repeated or not at variable intervals, without producing death. It is known, indeed, that doses which are somewhat high immediately produce arrest of the heart, without permitting the study of the modifications of the contraction.

From the comparison of these phenomena with the observations on emetine, it follows that the effects of atropine are rather those of emetine in an attenuated form than opposed to them. This phenomenon, however, observed in frogs, appears to be the reverse of that which occurs in higher animals, in which belladonna, and especially atropine, produces an enormous acceleration of the pulse. Nothing, therefore, in these observations on frogs indicates beforehand the possibility of an antagonism between the two alkaloids. This antagonism itself is difficult to determine, and it is only by very carefully establishing the necessary experimental conditions that it is possible to demonstrate it.

The conclusions appear to be that the acceleration is indeed only temporary. When the heart's action is slackened by a subcutaneous injection of emetine, the atropine introduced in the same way may re-accelerate it suddenly, but after a relatively long time. Finally, if it be desired to demonstrate the antagonism of emetine and atropine in an evident manner, emetine must be injected under the skin, milligramme by milligramme, until the sudden characteristic slackening of the heart is produced. If at this moment a very small portion of concentrated solution of sulphate of atropine be applied to the heart, a very remarkable re-ascent of the course of pulsations is produced; and what proves that these two actions are closely connected one with the other, is that, when a primary instillation of atropine has accelerated the pulse, slackened by emetine, and when its action is exhausted, and the pulse returns to its normal figure, it is in vain again to apply atropine; no acceleration is obtained. Atropine has, then, in relation to emetine, an action analogous to that which it exercises in relation to

muscarine and pilocarpine, as shown by the experiences of MM. Schmiedeberg, Kopp, and Vulpian.

Finally, whilst atropine is powerless to accelerate the heart of a healthy frog, it produces its results in an animal whose pulsations have been slackened by emetine.

So true it is, says the author, that the therapeutic action of the medicine (that is, its action on diseased organism) cannot be always deduced from the physiological action (that is, its action on a sound organism).

These facts demonstrate also that various medicinal substances have modes of absorption essentially different, and that it is necessary to take seriously into account these various conditions when negative results have to be considered.

HANSEN ON QUEBRACHO BARK.*

EARLY in the year 1878, a collection of vegetable drugs was sent by Herr F. Schickendanz from the Argentine Republic to Erlangen for investigation and examination. Among these was a bark which has since attracted considerable attention.—*Aspidosperma Quebracho.* The tree is common in the province of Santiago, and grows abundantly in the valley in which the city of Catamarca is situated. It belongs to the Natural Order Apocyneæ, and was named by Schlechtendal. The bark has long been employed as a febrifuge, and according to the physicians of Tucuman is equal to the cinchona barks in activity. Its chemical examination by G. Fraude at the Munich laboratory (G. Fraude, *Berichte der Deutsch. Chem. Gesel.*, 1878, p. 2189; 1879, 1558, u. 1560) resulted in the extraction of its alkaloid, whilst its clinical investigation by Dr. F. Penzoldt (*Berl. Klin. Woch.*, 1879, iv, 19) showed that it possessed valuable properties in the treatment of dyspnœa. These investigations resulted in a great demand for the drug, of which only a small supply could be obtained. The limited knowledge regarding its botanical source gave rise to much confusion, and also to some variation in the parcels brought into the market. This difficulty was increased by the fact that, in its native country, species of entirely different families received the popular name of 'Quebracho'. The word itself is derived from 'quebrar' and 'hacha', signifying 'breaking the axe'; and trees with very hard wood commonly receive this designation without regard to their botanical relationship.

The true Aspidosperma Quebracho is a tall tree, with a perfectly straight trunk from two to three feet in thickness, having a moderately large oval crown and sparse foliage, the extreme twigs being fine and pendant, as in the willow. The leaves are in triple whorls, they are leathery, lanceolate, entire smooth, and end in a sharp-pointed thorn. The flowers are arranged in cymes. The bark, as met with in commerce, is obtained from trees usually averaging from seventy to eighty years of age. The pieces have a thickness of from 20 to 30 millimètres. Quebracho bark is distinguished by the great development of the corky layer, in proportion to the entire dimensions of the bark. This corky layer makes such inroads into the tissue, that in most cases half and frequently more of the entire substance of the bark consists of this layer. The identification of the bark is a comparatively easy matter, inasmuch as it bears no resemblance to any other bark used in medicine.

[Dr. Hansen's paper is accompanied by a number of beautifully executed lithographic figures, illustrating the microscopical characters of the bark. His essay is a valuable contribution, and must long remain the standard authority on the subject. An excellent specimen of quebracho was exhibited at the International Medical and Sanitary Exhibition by Messrs. Burgoyne, Burbidges, Cyriax, and Farries, as agents for Messrs. Parke, Davis and Co. of Detroit.—*Rep.*] WILLIAM MURRELL, M.D.

* On Quebracho Bark, *Botanic Pharmacognostic Essay.* By Dr. Adolph Hansen (Assistant at the Botanic Institute of Erlangen).

GAUTIER ON THE ALKALOIDS DERIVED FROM PROTEID MATTERS UNDER THE INFLUENCE OF FERMENTS.

IN a short historical account, the writer gives the methods which he used in 1872 to extract the alkaloids which form in the albuminoid matters putrefied by contact with the air, and calls to mind how Selmi reached contemporaneously the same results by different ways. He then describes the principal chemical and physiological notions we have on that subject, such as have especially resulted from the researches of Selmi and his pupils. He also points out, according to his own views, the analogy of these ptomaines with some very poisonous vegetable alkaloids, analogies which are sometimes so marked that they may lead toxicologists into serious mistakes. But, as MM. Giannetti and Corona have well pointed out, most of these poisons act profoundly on the heart and the muscular contractility, so that after death the application of induction-currents to the muscles does not arouse contraction. This physiological reaction is almost characteristic of these substances.

Nevertheless, the researches and observations relating to the so-called cadaveric alkaloids had only a purely toxicological importance until a few months ago, when they acquired, in M. Gautier's judgment, a much higher and more general interest, through his having found that, far from being substances of exclusively cadaveric origin, they are normal and necessary products of the disassimilation of animal tissues. He says that he has extracted venom of serpents from the human saliva, and has found in normal urine very poisonous alkaloids, in all points analogous in their chemical and physiological properties to those which are extracted from albuminoid matters which become putrefied. Sometimes it is the glands of the mouth, sometimes the liver, the skin, or the cutaneous organs, which normally secrete these poisons in some animal species. But it is possible always to obtain, from the secretions and normal excretions of the higher animals, substances in all points comparable to those which were believed to be only derived from the action of bacteria on putrid matter. These toxic substances are therefore necessary products of the life of our tissues, constantly excreted in small quantities, and partially destroyed in the organism itself, especially under the beneficent influence of respiration. All disturbances in secretion and normal excretion, every arrest or diminution in the respiratory function, or in the blood-making process, is necessarily followed by pathological actions, which become generalised by the nerve-centres.

Though oxygen seems to penetrate into us at all points, some of our cells seem to live in a putrefactive manner, in the same way as the anærobic

ferments. M. Gautier demonstrates this in his memoir by two proofs. In the first place, he says, our secretions contain all the substances which have hitherto been met with in proteid matters submitted to putrefaction. In putrid products, however, urea is wanting; but it is known that many ferments transform it into carbonate of ammonia, and this is always found abundantly in putrefied matters. On the other hand, if, according to the experiments of Pettenkofer and Voit, the quantity of oxygen respired and rejected under all forms by one of the higher animals be calculated, it is found that a part of the food and of the tissues has become destroyed without the intervention of external oxygen, that is to say, by the putrefactive process. It therefore follows, from certain points of view, that we are, even in health, in an active condition of putrefaction.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. Da Costa.—On the Fluorides in Medicine. (*Arch. of Med.*, June 1881.)

2. Christy.—New Commercial Plants and Drugs.

3. Sorel.—On Treatment of Œdema of the Glottis by Pilocarpine. (*Jour. de Méd. de Paris*, p. 490.)

4. Cornilleau.—On Oxalate of Potash for Diphtheria. (*Ibid.*, p. 492.)

5. Rogers, J. G.—The Therapeutic Uses of Ergot in Nervous Diseases. (*New York Med. Record*, Oct. 27, 1881.)

6. Chalot.—On Intradermic Ignipuncture as a Radical Cure of Moderate Eczema. (*Paris Méd.*, Nov. 1881.)

7. Vernhuil.—On Galvanism in Coxalgia. (*Journ. de Méd de Paris*, p. 494.)

8. Melsens.—On the Treatment of the Bronchial Affections of Pulmonary Phthisis by Ammoniacal Inhalations. (*Bull. de l'Acad. Belge et Paris Méd.*, Oct. 22, 1881.)

9. Vidal.—On Turpentine Compresses. (*Gaz. Heb. de Méd et de Chir*, Nov. 4, 1881.)

10. Testa.—On the Toxic Action of Santonine. (*Il Morgagni*, 1881; *Lyon Méd.*, Oct. 9, 1881.)

11. Chéron.—On the Use of Effervescent Draughts containing Bromide of Potassium in Nausea, Vomiting, and Uterine Affections. (*France Méd.*, Oct. 1, 1881.)

12. Gibson.—On Sea-Sickness. (*Brit. Med. Jour.*, 1881, p. 662.)

13. Prior.—The Treatment of Diabetes Insipidus. (*Lancet*, Oct. 1881, p. 662.)

14. Atkinson.—Nitrite of Amyl and Nitro-Glycerine in the Treatment of Toothache. (*Practitioner*, Oct. 1881, p. 265.)

15. Murrell, W.—On Resorcin. (*Med. Times and Gaz.*, Oct. 1881, p. 486.)

16. Williams, A. Wynn.—On Tannin in Diphtheria. (*Brit. Med Jour.*, Oct. 1881, p. 654.)

17. Young, P. A.—On Iridin in Gall-Stones. (*Brit. Med. Jour.*, Oct. 1881, p. 694.)

18. Saundby, Robert.—On the Treatment of Consumption. (*Practitioner*, Oct. 1881, p. 249.)

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1. *Da Costa on the Fluorides in Medicine.*—Dr. Da Costa's observations (*Arch. of Med.*, June 1881) were made with potassium fluoride, sodium fluoride, ferrous fluoride, and ferric fluoride. They were all made from the purest attainable hydrofluoric acid, and in silver vessels. Some samples of acid contain traces of lead, and this renders great care in the selection necessary. To be certain of purity the commercial acid should be re-distilled, or made in silver or platinum vessels. The potassium fluoride was obtained by simply saturating the hydrated fluoric acid with potassium bicarbonate, and evaporating to dryness. A deliquescent salt results, soluble in three parts of water, and having a not unpleasant saline taste. It is insoluble in alcohol, and is precipitated by it from aqueous solutions. When concentrated, it dims glass. The sodium fluoride is prepared in the same way, substituting sodium bicarbonate for potassium bicarbonate. The salt is very slowly soluble in about twenty-five parts of water, and is infinitesimally dissolved by alcohol. The taste is purely saline, very much like sodium bromide, and even less disagreeable. From the weakness of the solution, it dims glass but slightly on long standing. The ferrous fluoride is made by dissolving iron in the warmed acid to saturation. By evaporating at a gentle heat, a yellowish-white salt is obtained, slowly soluble in about eight parts of water. It is permanent, and has a sharp styptic taste. Ferric fluoride is obtained by dissolving freshly precipitated hydrated ferric oxide in the acid to saturation, and evaporating. It is a light brownish-yellow salt, slowly soluble in about twenty parts of water, and having a sweet, mawkish taste. These salts were administered in the form of elixirs, made with rectified spirit and oil of bitter orange and of cinnamon; or as syrups, made with syrup or orange flowers. The first observations were made with the sodium salt; but its use was speedily abandoned, as even in three-grain doses it produced nausea, vomiting, thirst, and a burning pain at the epigastrium. The potassium salt was given, in doses of five grains every three hours, to two cases of subacute rheumatism. It produced a most decided effect on the pain without causing drowsiness or exerting any influence on the temperature. The urine was increased, and the specific gravity lowered; but this may have been owing to the greater amount of water taken in consequence of the thirst. In larger doses than five grains the medicine is apt to be an emetic, and from ten to twenty grains will in most people quickly cause vomiting, with a moist skin, and a slightly reduced pulse, though without subsequent depression. Professor Da Costa considers that there is no prompter emetic than fluoride of potassium given in these doses. The stage of nausea is always short, and is frequently absent. It was found that the preparations of iron were not very satisfactory. The ferric fluoride in two-grain doses gave rise in four or five days to anorexia and nausea. The ferrous fluoride was agreeable to take, but could not be continued long, as loss of appetite, gastric uneasiness, and sometimes nausea, interfered with its use. Dr. Da Costa is convinced from his experience that, although the fluorides may possess some properties of value, their applicability in medicine and their therapeutic use will not be great. [Hydrofluoric acid has been used by Mr. Macnamara of the Westminster Hospital in the treatment of goitre.—*Rep.*]

2. *Christy on New Commercial Plants and Drugs.*—Mr. Christy's papers are always interesting, and we certainly owe him a debt of gratitude for the untiring energy with which he supplies us with new plants and drugs. We have no sooner investigated one than he has half a dozen others ready for us. Some, such as chaulmugra oil, quebracho bark, menthol, damiana, Jamaica dogwood, papaw, duboisia, and coca, are old friends, and are familiar enough by this time; but others, such as go-siu-ju, hak-tau-au (*Anemone cernua*, han-ge, kuh-shing, and mahng dah-rah-gay (*Datura alba*), are quite

new, and have all their troubles before them. The kola-nut tree, judging from Mr. Christy's description, should be an interesting drug. It is a native of tropical Africa, and so highly are the nuts valued that the presentation of a few, or even one, is esteemed a high compliment, and when given by a chief to a white trader conveys an assurance of welcome, friendship, and protection. Where the nuts are not indigenous, no business can be transacted without a few of them being previously eaten, and no marriage gift of the bridegroom to the father would be deemed acceptable for the purchase of his daughter, unless it comprised a considerable amount of the kola seeds. Although slightly bitter, and astringent, strangers quickly become accustomed to the taste, and the habit of chewing the nuts soon becomes an imperative necessity. They support the strength, allay inordinate appetite, assuage thirst, promote digestion, and render those who use them capable of prolonged fatigue. As an example of how highly they are prized, it is stated that at Fezzan they sell in the fresh state at the large sum of a dollar for four seeds, and that they are offered to visitors as a substitute for coffee, being handed round on salvers. In conjunction with gold dust and salt, they form the staple commodity of Soudan. Mr. Christy's account is excellent, and his papers are well worth reading.

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3. *Sorel on Treatment of Œdema of the Glottis by Pilocarpine.*—M. Sorel, who is a military surgeon at Setif, Algeria, sent to the Société de Thérapeutique in Paris (*Jour. de Méd. de Paris*), a case of œdema of the glottis consecutive on typhoid fever, and cured by pilocarpine. A previous application of fifteen leeches had not given any relief. Ipecacuanha had no effect whatever, and subcutaneous injections of morphia had only given temporary relief. Almost in despair, M. Sorel tried an injection of a centigramme of nitrate of pilocarpine. A slight perspiration appeared, and the troublesome symptoms were removed. On the same evening a fresh injection of a centigramme was made, and on the next day two centigrammes. The patient soon recovered his strength, and became convalescent.

4. *Cornilleau on Treatment of Diphtheria by Oxalate of Potash.*—M. Cornilleau, in an interesting pamphlet, relates that, having to give attention to an epidemic of diphtheria, he obtained good results by the following treatment. He gave a decoction (*tisane*) of fresh sorrel, and every three hours a dessertspoonful of this mixture: Binoxalate of potassium, 2 grammes; infusion of green tea, 120 grammes; syrup of bitter orange-peel, 30 grammes. From the commencement of the attack, M. Cornilleau gave an additional emetic of hydrochlorate of pilocarpin, according to the following formula: Syrup of ipecacuanha, 45 grammes; powdered ipecacuanha, 1 gramme; hydrochlorate of pilocarpin, 1½ grammes; distilled water, 50 grammes. The crystals of pilocarpine must, in the first instance, be dissolved in distilled water. This draught should be taken in two parts, with an hour's interval, if the patient be an adult, in four doses if a young person, and in six doses if a young child. This draught brings on especially fits of nausea, followed by copious expectoration, rather than thorough vomitings. It is easy to understand that, afterwards, the flow of saliva set up by the jaborandi alkaloid carries away the false membranes. In the meantime, M. Cornilleau paints the front part of the neck with tincture of iodine, and repeats the painting twice a day. After that he gives oxalic preparations, with the intention of destroying the microphytes which generate diphtheria. When acute angina rapidly invades the throat, M. Cornilleau removes one or both the tonsils with the amygdalotome, and says that he succeeded in the three cases with which he met. He concludes by insisting on the necessity of a strengthening regimen of wine, grog, and nourishing food.

5. *Rogers on the Therapeutic Uses of Ergot in Nervous Diseases.*—The now widely extended use of ergot in various nervous disorders make the following clinical notes regarding the drug of considerable interest. They are furnished by Dr. J. G. Rogers, superintendent of the Indiana Hospital for the Insane (*New York Med. Rec.*, Oct. 27, 1881). It is not alone to the influence of ergot and the bromides on the calibre of the blood-vessels that the potent effects are due, but they both peculiarly, and not exactly similarly, possess a power to repress excessive nerve-life to a certain extent. The combination of bromide and ergot is used in such cases as do not positively require chloral. In milder types of active mania, ergot alone has seemed to exert a decided curative influence, and a large number of such cases have been solely treated with this agent with satisfactory results. The experience of the year presented in the clinical records, in which the history of every patient is regularly kept, as explained in his last report, fully endorses the efficacy of ergot as a means of controlling cerebral plethora, whether active or passive. Its action is prompt, and can be maintained in the majority of cases indefinitely without detriment. Beyond its special effect on the vaso-motor system, which is now generally recognised, there is every reason to believe that it exerts a peculiarly controlling influence over the molecular life of nervous tissue, when that life has gone beyond the physiological mean of activity, and has become erethetic, excessive, and self-destructive—what in another less mysterious tissue would be recognised as inflammatory. Practically it does control mental excitement whenever associated with congestion, whether the subject be anæmic and exhausted, or otherwise. In cases of acute mania, it seems to be always more or less applicable, and in the acute exacerbations of chronic mania it is equally so. As it has no direct hypnotic effect, however, in those cases when delirium has lasted for many days and nights without ceasing, and the patient must either sleep or die, as is often the case when admitted, it is necessary to assist its action with chloral-hydrate. This latter agent of itself, in full dose tends to produce a secondary passive fulness of the head, but this effect is obviated by the ergot.

6. *Chalot on Intradermic Ignipuncture for the Radical Cure of Inveterate Eczema.*—There are cases of eczema which resist every kind of internal treatment: arsenic, iodide of iron, iodine of potassium, chlorides of gold and of sodium, cod-liver oil, and which, at the same time, are in no way modified by the various local forms of treatment habitually used, viz., tannin, nitrate of silver, tincture of iodine, etc. In such circumstances there remains only one resource: the destructive method, with its various procedures. Dr. Chalot (*Paris Méd.*, Nov. 1881), chooses ignipuncture by means of Paquelin's cautery. He takes care to maintain the point of the cautery during the whole of the operation at white heat, because the cauterisation is then less painful than if performed with a cautery heated only red. He takes care to introduce the point into the thickness of the skin. Too superficial a cauterisation would not only fail, but would aggravate the disease. The

punctures must be made sufficiently near, at intervals of from 6 to 7 millimètres (about one-fourth of an inch); the inflammatory modification which follows the operation should not leave any point of diseased surface outside the sphere of its action. Dr. Chalot recommends that the cauterisation should extend at least from 5 to 6 millimètres beyond the limits of the eczema. The formation of new vesicles around the surface operated upon is thus prevented. After ignipuncture, the part is covered with compresses of cold water. The pain is not very great on the first day. It increases on the second and third days, when inflammatory reaction is produced by the elimination of the eschars. This is treated with compresses dipped in carbolised water, and covered with oiled silk. When the eschars have fallen off, the ordinary treatment of granulating wounds is followed. Slight cauterisations with nitrate of silver, and dressings with powdered oxide of zinc, are the methods which have given the best results in Dr. Chalot's hands. When the diseased surface is of small extent, not exceeding the dimensions of a five-franc piece, one sitting suffices. If the eczema occupy a very large extent, many operations may be necessary; one, for example, every week, care being always taken to go beyond the apparent limits of the disease.

7. *Verneuil on Galvanism in Coxalgia.*—M. Verneuil brought under the notice of the Paris Société de Chirurgie, at a meeting in October, an episode in the progress of coxalgia, which has not been sufficiently noted by writers on the subject, viz., a special form of recurrence of coxalgia after apparent cure. He gave the following as a type of this class of case. Five years since, he saw, with M. Leudet of Rouen, a girl, aged 9, who was attacked with coxalgia of a mild form at the outset, which M. Verneuil thought from its antecedents to be of a rheumatic character, and of which he made a favourable prognosis. The child was placed in a Bonnet's apparatus which, shortly afterwards, was succeeded by Bouvier's trough. The cure was tedious; a small abscess formed outside the joint, and was cured in a fortnight. Fifteen months ago, that is to say, three years and a half after the appearance of the affection, M. Verneuil declared the child to be cured. Both limbs were of precisely the same length; there was not the least lumbar lordosis, and there was only a small remnant of stiffness in the joint. During this time, the girl had become considerably developed, and the menses had appeared. M. Verneuil, therefore, announced that cure was complete. Shortly afterwards, the father of the girl came to tell him that she limped, and, in six months, the patient was again under his charge. There was, again, considerable deformity, very marked lumbar lordosis; apparent shortening was brought on by the drawing up of the pelvis, but there was neither swelling nor pain, nor any trace of inflammatory action. The faulty position was reproduced without any trace of inflammation. Several surgeons having persuaded the father not to proceed further, and persisting in declaring the child to be cured, although the deformity continued to increase, she was again brought to M. Verneuil. He sought for something in the case analogous to the mechanism of flexion consecutive on inflammations of the knee by paralysis of the triceps, and discovered that the muscles of the nates were completely paralysed. He thought, therefore, that the deformity was reproduced by the contraction of the psoas, the adductors, and the sartorius muscle. Under anæsthesia, by chloroform, he corrected the faulty position; the straightening was perfect, and there was complete symmetry. He again placed the girl in one of Bonnet's troughs; a month afterwards he applied Bouvier's apparatus, ordering that it should have a lengthened trial; and also ordered faradisation of the gluteal muscles; but it was a very long time before any good results followed this treatment. The latter fact gave to M. Verneuil the explanation of many others; the case was one of recurrence of deformity without return of inflammation of the joint; of muscles consecutively rendered powerless, whilst the antagonistic muscles retained their contractility. These facts led M. Verneuil to find in the muscular system a physiological explanation of the two periods of coxalgia. In the first stage, there are abduction, rotation outwards, evident lengthening, and permanent flexion. In the second stage, there are, on the contrary, abduction, rotation inwards, and shortening by the raising of the pelvis. These observations led M. Verneuil to form the following theory. The inflammation of the joint is if propagated to the muscles immediately in relation with the capsule, that is to say, to the psoas and the small gluteal muscles, leading to elongation of the limb with abduction. After a time these muscles become atrophied and lose their power; the inflammation spreads to the most distant muscles, that is to say, to the abductors and the sartorius; then come rotation inwards, shortening by elevation of the pelvis, that is to say, metamorphosis of position in the first stage of coxalgia; in the second period, slow contraction of the healthy muscles at the same time with the impotence of the muscles originally attacked. An important therapeutical indication is deducible from this fact, that of galvanisation of the enfeebled muscles.

8. *Melsens on the Treatment of Bronchial Affections of Pulmonary Phthisis by Ammoniacal Inhalations.*—M. Melsens highly recommends (*Bull. de l'Académie Belge, et Paris Méd.*, Oct. 22, 1881) the therapeutic employment of ammonia by inhalation in phthisis. Knowing that ammoniacal emanations may be respired without danger, of which the proof is the perfect health of workmen who dig guano, and also knowing the good effects of the air of cow-houses in pulmonary phthisis, effects which are generally with justice attributed to the emanations of carbonate of ammonia generated in these stables, M. Melsens conceived the idea that continuous but moderate respiration of this salt might be useful in other affections of the respiratory organs. He decided, after an attack of acute bronchitis, to make the experiment on himself. For that purpose, he wore outside his shirt a bag containing some pieces of carbonate of ammonia; after some time he was absolutely relieved from the affection; improvement set in from the first day. Several invalids who employed the same means obtained great benefit from it, even in cases of long continued chronic bronchitis. Amongst others, a physician at Brussels, who had suffered for a long time from an obstinate cough, due to chronic bronchitis, with dilatation of the bronchi, complicated with emphysema, asthma, and sometimes to acute laryngitis. He used the bag of carbonate of ammonia, and found himself perfectly cured.

9. *Vidal on Turpentine Compresses.*—M. Vidal, in a communication to the Therapeutical Society of Paris, Oct. 26, 1881 (*Gaz. Hebdom. de Méd. et de Chir.*, Nov. 4, 1881), reminded the Society that in 1871 he had recommended the use of compresses of

flannel, wetted with turpentine and covered with oiled silk. If the compress remain *in situ* for more than half an hour, vesication is generally obtained. The intensity of the revulsion may, however, be diminished by not putting on any impermeable covering, such as oiled silk, and allowing the turpentine to evaporate freely. M. Vidal attributes the remarkable success which he has obtained in cases of peritonitis not of a puerperal character, not only to the energetic revulsionary character, but to the absorption of the turpentine by the skin; the pulse rises, the general state and facies rapidly improved, and cure is abundant in cases which seemed desperate. He has also obtained excellent effects in the broncho-pneumonia of infants.

10. *Testa on the Toxic Action of Santonine.*—Dr. Testa (*Il Morgagni*, 1881; *Lyon Méd.*, Oct. 9, 1881) desires, by his experimental researches, to call attention to the use and the too frequent abuse of santonine, and to show that it has a toxic action, even when administered in relatively small doses. It is necessary to be careful of the slowness with which it becomes eliminated from the organism, and of its accumulative power in the blood when it is administered in varied and successive doses. Testa has made experiments on frogs, pigeons, guinea-pigs, cats, and dogs. He deduces as the results of his experiments that the santonate of soda, injected under the skin of frogs, acts slowly. Pigeons are more sensitive to toxic action, and, at the same time, the phenomena are more distinct and more sensible. In dogs, even when administered in large doses, in the form of subcutaneous injection, of from three to four grammes of santonate of soda, the action of the salt is very slight. M. Testa, as a conclusion of the necroscopic researches performed on the bodies of animals submitted to experiment, has been led to admit that the action of santonine does not affect the spinal cord. In his experiments on pigeons, he has noted that by removing one of their cerebral lobes before the subcutaneous injection of santonate of soda, the toxic action showed itself more sensibly, and was even stronger, especially on that side of the body which was no longer under the nervous influence of the lobe which was removed. He therefore concludes that the action of santonine is general with regard to the brain, but that its special action is localised in the medulla oblongata.

11. *Chéron on the Employment of Effervescing Draughts containing Bromide of Potassium in Nausea, Vomiting, and Uterine Affections.*—Dr. Chéron (*France Méd.*, Oct. 1, 1881) has found that the combination of effervescent draughts and bromide of potassium gives very superior results to those which can be obtained by the separate employment of these two medicines. Hence, in cases of nausea and recent or chronic vomiting, he uses the following prescription. No. 1. Bicarbonate of potash, 2 grammes; water, 60 grammes; bromide of potassium, 2 grammes. No. 2. Citric acid, 3 grammes; water, 120 grammes; syrup, 40 grammes. A teaspoonful of No. 1 is put into a glass, and a tablespoonful of No. 2 added to it; the mixture must be shaken, and taken immediately. This dose should be taken every hour or two hours. Nos. 1 and 2 represent the maximum quantity which should be used every day in cases of localised pelvic-peritonitis. This dose frequently stops the nausea and vomiting, even during the acute stage.

12. *Gibson on Sea-Sickness.*—Mr. Charles Gibson, in the *Brit. Med. Jour.*, Oct. 1881, p. 730, draws attention to the great value of bromide of sodium in large doses in the treatment of sea-sickness. Amyl-nitrite he has found only occasionally useful; but for readiness of application, especially among emigrants, the hypodermic use of morphia is the most convenient and efficacious remedy.

13. *Prior on the Treatment of Diabetes Insipidus.*—Dr. Prior, in the *Lancet*, Oct. 1881, p. 662, reports a case of this disease in which large doses of valerianate of zinc (ten to twelve grains three times a day), given in combination with tincture of valerian in two-drachm doses was, after two months' perseverance, followed by a perfect cure.

14. *Atkinson on Nitrite of Amyl and Nitro-Glycerine in the Treatment of Toothache.*—Dr. Atkinson finds (*Practitioner*, Oct. 1881, p. 263) that cotton-wool, steeped in a one per cent. solution of nitro-glycerine, applied to a decayed tooth, will give instant relief; if, so soon as the pain has ceased, laudanum be applied by means of fresh cotton-wool, the pain may be kept off regularly for four hours or more at a time.

15. *Murrell on Resorcin in Asthma, and the Effects of an Overdose.*—In the *Med. Times and Gaz.*, Oct. 1881, p. 486, Dr. Wm. Murrell gives the history and composition of this new drug, and describes its value in asthma, and the results of an overdose. From the results of experiments on animals, Dr. Murrell was led to hope that good results would follow its exhibition in spasmodic asthma. Accordingly, after a host of other remedies had proved useless in the case of a young woman, aged nineteen, she was given, during a severe paroxysm, half a drachm of resorcin in milk. The relief was marked. Next day, the urine presented the appearance usual after taking carbolic acid. On two subsequent occasions the same dose failed to give relief; so, on the next attack, one drachm was exhibited. Slight giddiness immediately followed, and she feel asleep, all dyspnœa passing away. The same result followed on four subsequent occasions. The action on the urine was more marked with the larger dose. She was satisfied that the powders eased her, but she postponed taking them as long as possible on account of the giddiness that followed. With drachm-and-a-half doses, no unpleasant results were noticed. One morning, at seven, during a violent attack, she was given two drachms of the drug in a little milk. Almost immediately, as she subsequently related, it flew to her head, she felt giddy, and had 'pins and needles' all over. At 7.10, Dr. Jessop found her insensible, in a profuse perspiration from head to foot, groaning, pallid, lips blanched, tongue dry; no spasms. The stomach pump was used, and stimulants given. At 8.45, she was out of danger. The reason of the violence of the symptoms was that the last dose of resorcin was not only larger than the previous ones, but also the drug was newer and purer. The symptoms developed in the case presented several points of interest. 1. They were much those of carbolic acid; 2. The temperature fell at 8 a.m. to 95 deg. in the axilla. Dr. Andeer thinks that albuminate of iron and red wine form the best antidotes in poisoning by resorcin.

16. *Williams on Tannin in Diphtheria.*—Dr. A. Wynn Williams, in the *Brit. Med. Jour.*, Oct. 1881, p. 654, claims for the local application of tannin all the value that he maintained this drug possessed in 1867, when, before the Obstetrical Society, Dr. Williams read a paper on the treatment of diphtheria. The deposit, characteristic of the disease, is almost instantaneously removed by the free application of a solution of tannic acid, two drachms;

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rectified spirits of wine, two drachms; and of water, six drachms.

17. *Young on Iridin in Gall-stones.*—Dr. P. A. Young, in the *Brit. Med. Jour.*, Oct. 1881, p. 694, speaks highly of the value of iridin as a preventive to the formation of gall-stones. In several cases in which this drug has been given a fair trial, the results seemed to justify the favourable opinion that Dr. Young had formed of its value.

18. *Saundby on the Treatment of Consumption.*—Dr. Robert Saundby, in the *Practitioner*, Oct. 1881, p. 249, gives a very valuable *résumé* of this subject. Cod-liver oil and quinine are Dr. Saundby's sheet anchors, the hypophosphites having disappointed his expectations. Good nourishment and attention to the digestive functions form the best treatment of cough. If a consumptive patient want to take a short cut to the next world, he has only to take an opiate, paregoric for example. Codeia is most valuable. Camphor inhaled, a lump under the pillow, or some powder in a jug of boiling water, forms an effectual anodyne. To prevent dryness of the mouth, a compressed tablet of chlorate of potash and borax in the cheek remains all night, and causes sufficient salivary secretion to keep the air-passages moist. The bronchitic attacks are to be met by the use of turpentine vapour and counter-irritation, and sulphur internally. Nothing controls the profuse secretion of the bronchial mucous membrane so readily as fifteen to twenty grains of sulphate of iron, given in pills or mixture during the day. The use of oro-nasal inhalers, charged with carbolic acid or eucalyptus oil, is strongly advocated. For anorexia, quinine does more than any other drug; while the peptones, Hoff's malt-extract, and such like preparations, are, in many cases, most valuable. Cod-liver oil, in doses of one teaspoonful, after meals, thrice a day, Dr. Saundby believes to be quite sufficient, larger doses not being assimilated. The diarrhœa is always controlled by two drachms of dilute sulphuric acid to the pint of sugared orange-water, drunk *ad libitum*, unless ulceration be present; and then starch and laudanum enemata, or an enema of half an ounce of liquid extract of ergot, will, in most cases, give relief. The sweating is generally controlled by the same means as are used for the diarrhœa; but if not, then atropine or picrotoxine must be used. Hæmoptysis Dr. Saundby treats with ergot internally or subcutaneously. In conclusion, a tabulated view is given of the different remedies. Specific: quinine, cod-liver oil; Cough: liquorice, camphor, codeia lozenges; Bronchitis: turpentine inhalations and epithens; Purulent expectoration: eucalyptus inhalation, sulphate of iron; Anorexia: quinine, peptonised food, malt extracts, cod-liver oil, ether, alcohol; Diarrhœa: sulphuric acid, starch and opium enema, ergot enema: Sweating: sulphuric acid, ergot, ergotine. A good prescription in many cases is the following: ℞ Quinæ sulphatis, gr. j; specific, tonic; Ferri sulphatis, gr. v; for profuse expectoration; Acidi sulphurici diluti, ℥xv; for sweating, diarrhœa, and hæmoptysis; Aquæ, ad ℥j. M. To be taken thrice daily. If the sweating be not hereby checked, a minim of solution of sulphate of atropine may be added, and codeia lozenges may be given, with cod-liver oil in addition, if need be.

RICHARD NEALE, M.D.

Lond. Hosp. Record

MEDICINE.

RECENT PAPERS.

1. Leloir.—Two Cases of Muscular Atrophy of Peripheral Origin. (*Le Progrès Méd.*, 1881, Nos. 42, 43.)

2. Cyr.—Cirrhosis of the Liver. (*Gaz. Hebd. de Méd. et de Chirurg.*)

3. Kynsey.—On Parangi. (*Brit. Med. Jour.*, Oct. 1881, p. 712.)

4. Booth, J. Mackenzie.—On Acute Bright's Disease. (*Brit. Med. Jour.*, Oct. 1881.)

5. Clubbe, C. P. B.—Diabetes Insipidus Treated by Electricity. (*Lancet*, Oct. 1881, p. 749.)

6. Dukes, Clement.—On the Period of Incubation of Scarlatina, Varicella, Parotitis, and Rötheln. (*Lancet*, Oct. 1881, p. 743.)

7. Warner, Francis.—On Hydrophobia in a Child. (*Lancet*, Oct. 1881, p. 664.)

8. Barié and Du Castel.—Embolism of the Aorta. (*Archiv. Gén. de Méd.*, Jan. 1881.)

1. *Leloir on Two Cases of Muscular Atrophy of Peripheral Origin.*—M. Leloir (*Le Progrès Méd.*, 1881, Nos. 42, 43), during his *internat* with Professor Vulpian, had under observation two cases of muscular atrophy of peripheral origin. The first case was that of a previously healthy man, attacked, six months after a wound of the left leg by a shell, and freezing of both lower limbs, in 1870, by deformity of both feet in varo-equinus, more marked on the left side, and for which section of the tendo Achillis and long peroneal tendon was performed unsuccessfully. Six months after these tenotomies the muscles of his legs atrophied, especially the left. This atrophy steadily increased. In 1872, he suffered from pains in the knees, especially the left. In 1873, the thenar and hypothenar muscles of the right hand, then of the left, atrophied by degrees. This atrophy steadily increased, and was accompanied by cyanosis and lowering of temperature of the hand and fingers. About the same time there appeared fibrillar twitching of the muscles, not only of the hands, but of the muscles of the arms, shoulders, trunk, pectorals, and of the muscles of the thighs. From time to time there was pain in particular muscles, especially in the knees and wrists. There was no anæsthesia. In the second case the patient had pleurisy on the left side, and two months after a severe blow on the same side from the shaft of a cart, and some months later had an abscess in his left hand, with inflammation spreading up the arm. Three years later, in 1877, he noticed that the thenar and hypothenar muscles had commenced to atrophy, and at the same time the atrophy appeared in the muscles of the forearm. From the first also there was anæsthesia of the palmar surface of the four last fingers of the left hand. Then the nails became thickened, roughened, and deformed, and some months after there was some pain in the ends of the fingers. In 1881, there was complete atrophy of the muscles of the hand and antero-internal region of the left forearm; the muscles of the upper arm were also atrophied, and for the last two years the patient had noticed twitchings of the muscles of the left side of the thorax, and of the arm and shoulder, which made one fear the extension of the disease and the atrophy of new groups of muscles.

2. *Cyr on Cirrhosis of the Liver.*—Dr. Cyr of Vichy (Reprint from *Gaz. Hebdom. de Méd. et de Chir.*) having met with a number of cases of enlarged liver, many of which seemed, from their

subsequent histories, so far as he could trace them, to become ultimately atrophied, has collected 205 cases of cirrhosis of different forms published during the last few years, and has analysed the data given concerning them. He shews that a great many cases do not conform to the typical descriptions of either the atrophic or hypertrophic forms of cirrhosis. He thinks the explanation may be found in the co-existence of two or more etiological factors, each of which determine certain changes peculiar to itself. Finally, he arrives at the following conclusions. 1. The so-called atrophic sclerosis, or alcoholic sclerosis, may, and often does present a first stage, during which the liver is enlarged. Jaundice supervening under these circumstances may give rise to the belief that it is a true hypertrophic cirrhosis, when this is only an epiphenomenon, or the result of some complication, or a symptom of some other co-existing affection. 2. The discovery of a diminution in the size of the liver is of importance in the diagnosis of the form of the sclerosis; the enlargement of the liver is of infinitely less importance, as it may be the effect of very different circumstances, and may exist in very different cases. 3. The varied appearances which may be presented by hepatic sclerosis are connected either with distinct etiological elements, or with the simultaneous action of many of these elements, each having its special influence, and impressing the affection with its own characters. 4. We may admit provisionally a classification into connective and epithelial cirrhoses, or interstitial and parenchymatous, but rather from a histological than a clinical standpoint. 5. The comparative duration of the evolution of the disease in these two categories is difficult to establish, from want of precise data. At any rate, it is not proved that it is shorter in one than the other. 6. A rapid termination is more to be feared in parenchymatous than in interstitial cirrhosis, because the parenchyma is the principal seat of the process of disorganisation. 7. Except in the early stages, in which we possess means of a certain efficacity (revulsives, alkalies, salts of ammonia, etc.), the treatment, in either category, is purely palliative, and can but retard the termination. ROBERT SAUNDBY, M.D.

3. *Kynsey on Parangi.*—In the *Brit. Med. Jour*, Oct. 1881, p. 712, an interesting account may be found of this obstinate epidemic disease met with in Ceylon. The etiology of the affection is obscure. It is evidently contagious, through the discharges coming from the ulcers and eruptions that accompany an attack. A healthy child may suckle with impunity a diseased mother. If allowed to run its course it may last six months, up to its third stage, when the characteristic eruptions develope themselves, passing into the fourth stage, that of sequelæ, which varies in duration according to treatment, often extending to eight years. No mention is made, however, as to the best method of treating the disease. [In addition to the papers on the subject noted in the *Med. Digest*, others have since appeared in the *Med. Times and Gaz.*, vol. i, 1877, p. 169; ii, 1878, p. 593; ii, 1879, p. 420; i, 1880, pp. 201, 688. *Rep.*]

4. *Booth on Acute Bright's Disease in an Infant Three Months old.*—Dr. J. Mackenzie Booth relates, in the *Brit. Med. Jour.*, Oct. 1881, p. 626, the case of an infant who caught cold, and passed safely through an attack of acute desquamative nephritis.

5. *Clubbe on Diabetes Insipidus treated by Electricity.*—Mr. C. P. B. Clubbe reports a case of diabetes insipidus, cured by faradisation over the kidneys for a space of five months. [Vide *Lancet*, October 1881, p. 749. In the *London Med. Record*, Jan. 1881, p. 15, a case by Dr. Althaus, cured by the same mode of treatment, is reported.]

6. *Dukes on the Period of Incubation of Scarlatina, Varicella, Parotitis, and Rotheln.*—Dr. Clement Dukes, in the *Lancet*, October 1881, p. 743, contributes a very interesting paper on these subjects, upon which his official capacity in the Rugby School and Hospital entitle him to speak with authority. In seventeen cases of scarlatina, in which the incubation period was carefully studied, the earliest was one day, the latest, nine. In fifteen cases of varicella, the earliest date noted was fourteen days, the latest, eighteen. In about fifty cases of mumps, the incubation period extended from sixteen days the earliest, to twenty-five the latest. The frequently attending orchitis of mumps, Dr. Dukes shows, is not a metastasis, but a complication that can be watched for; never coming before nor after a certain definite time, and coming only in certain cases—viz., in those that have arrived at or beyond the age of puberty. This fact, says Dr. Dukes, is a great guide to treatment; for by keeping all likely cases in bed until the ninth day, and carefully taking the temperature, which rises before the pain is felt, and, on the slightest rise of temperature, applying a hot poultice to the testicles, the severe pain is mitigated, and the acute general symptoms are diminished by the patient being placed thus early under general treatment. In one case, the orchitis took the place of the parotid swelling on the first day, the parotids not being touched from beginning to end, but only the submaxillary glands; and this case was the most severe ever met with. Rötheln Dr. Dukes believes to be a disease *sui generis*, and does not think it bears any more relation to measles than does varicella to variola. The incubation period is very difficult to trace, but twelve to eighteen days appear about the average duration. A very good description is given of a typical mild and of a typical bad case.

7. *Warner on Hydrophobia.*—Dr. Francis Warner publishes in the *Lancet*, Oct. 1881, p. 664, an interesting case of a young man admitted into the London Hospital on September 21, having had a fight with a fellow-workman on the 19th, for which he was dismissed from his employment. Next day he felt ill, thirsty, and very feverish. He was naturally of an excitable and passionate temperament. Two months before the onset of his illness, he had been bitten by a dog, and had been, ten days subsequently, mentally depressed, expressing his fear of hydrophobia. At 1.30 p.m., September 21, when seen in bed, he was the subject of violent and frequently recurring spasmodic paroxysms. He was semi-unconscious, but could kick at, swear at, spit at, and throw a vessel at, the nurse. The tongue was bitten, and the saliva was blood-tinged. The jaws were closed by trismus; he appeared desirous to drink, but could not. Splashing water near, or pouring water over his closed lips, did not affect him. Urine drawn off during life was loaded with albumen, and also after death. There was no opisthotonos, and no lyssæ were found under the tongue. A tenth of a grain of curare was given hypodermically at 4.20, and he quietly died at 4.30. At the necropsy, the spinal cord and meninges were much congested, but no hæmorrhage was found in either cord or brain, and no fracture. All the internal organs were much congested, the kidneys intensely so, but otherwise normal. It is to be remarked that the onset of the symptoms was very abrupt, and the illness lasted only twenty-two hours.

The absence of any increased symptoms when water was splashed near the patient, or when the attempt was made to give him drink, was against the idea of hydrophobia; while the absence of opisthotonos and abdominal hardness, with the fact that muscular spasms were chiefly limited to the respiratory muscles, was against the diagnosis of tetanus; and the final diagnosis of hydrophobia rested upon the limitation of spasms to the respiratory muscles and mouth, the attendant asphyxia, and absence of opisthotonos and hardness of the abdominal muscles, the impossibility of drinking, the great distress from spasms, and dread of them. At page 674 is an instructive editorial article upon this anomalous case, supporting the diagnosis of hydrophobia. [Singularly enough, in the same number of the *Lancet* as that recording this interesting case, two cases of acute renal disease are referred to that may possibly throw some further light upon Dr. Warner's case (vide page 672). Dr. Litten, of Berlin, describes two acute cases of renal disease, which must be classed as renal mycoses. The conspicuous symptom of each case was the gradual diminution of the secretion of urine, with rapid development of uræmic symptoms. In a boy, after a very short illness, the kidneys were found after death intensely congested, crammed with bacteria, the urine having been loaded with albumen before death. A girl, aged seventeen, died under similar conditions, the kidneys showing the same changes. The kidneys in Dr. Warner's case do not appear to have been examined microscopically.—*Rep.*] R. NEALE, M.D.

8. *Barié and Du Castel on Embolism of the Aorta, with Experiments on the Production of Cardiac Murmurs.*—The authors (*Archiv. Gén. de Méd.*, Jan. 1881), narrate the case of a laundress, aged 30, who was confined, for the third time, four months and a half before admission to hospital, when she was in a febrile condition. A few days after she had a severe rigor, with great pain in the loins, and tingling in the limbs, followed by paraplegia. There was total absence of pulsation in both limbs. Not a trace of murmur was to be heard over the heart; but in spite of this the diagnosis was ulcerative endocarditis of puerperal origin, with embolism of the abdominal aorta, and consecutive paraplegia. A bed-sore over the sacrum and incontinence of urine and fæces followed, the urine being bloody and albuminous. Up to the time of death consciousness was retained, and the cardiac sounds maintained their purity. At the necropsy, ulcerative endocarditis of the left side was found, along with a large clot attached to the wall of the auricle, and prolonged into the ventricle, where it was adherent to the chordæ tendineæ. The auriculo-ventricular valve was perforated; the aortic competent, but inflamed. At the bifurcation of the aorta there was a large fibrinous clot, not adherent to the vessel. The spinal meninges and the cord itself were much congested in the lumbar region, the kidneys were studded with infarcts, the spleen congested, and its main artery obliterated; there were no signs of embolism in the brain, the lungs, or the liver. The authors cite several cases of aortic embolism and thrombosis, and point out that the former is more frequently met with than the latter. To explain why there was no murmur in their case, when the clot would be expected to produce one, MM. Barié and Du Castel, under the supervision of M. Potain, arranged a series of tubes of the same calibre, through which currents of water (at the same pressure) flowed. In these tubes were placed diaphragms of the same metal, perforated by apertures of different shape and position. They found that the intensity of the murmur was the same in all, whatever the form and situation of the orifice might be. Then to make out whether the material of which the obstacles were composed had any influence, they removed the diaphragms, and substituted foreign bodies of different nature and resistance. The murmur was loud and distinct when the obstacle was hard and resistant; but when it was soft and velvety the murmur almost disappeared. They therefore conclude: 1. That the form of the orifice has no influence over the production of the murmur; 2. That the consistence of the walls of the orifice exerts a notable influence upon the intensity of the murmur. G. A. GIBSON, M.D.

SURGERY.

RECENT PAPERS.

1. BRYANT, T.—On Surgical Operations in Phthisis. (*Lancet*, Oct. 1881, p. 753.)
2. WHITEHEAD, WALTER.—On Excision of the Tongue by Scissors. (*Lancet*, Oct. 1881, pp. 698, 745.)
3. ILLINGWORTH.—On Manipulation in Reduction of Dislocated Humerus. (*Brit. Med. Jour.*, Oct. 1881, p. 626.)
4. COUSINS, J. WARD.—On Antiseptic Paracentesis, with Trocar. (*Med. Times and Gaz.*, Oct. 1881, p. 554.)
5. JONES.—On Successful Gastrostomy. (*Brit. Med. Jour.*, Oct. 1881, p. 709.)
6. O'FARRELL, J. M., and HOLMES.—Wounds of the Lung. (*Lancet*, Oct. 1881, p. 748.)
7. POLAILLON.—A Modified Operation for Resection of the Lower End of the Tibia and Fibula. (*Jour. de Méd. de Paris*, Oct. 1881.)
8. EHRENDORFER.—Excision of a Wedge-Shaped Piece from Various Bones. (*Wiener Med. Woch.*, Nos. 14-16.)

1. *Bryant on Surgical Operations in Phthisis.*—Mr. T. Bryant read before the Medical Society the notes of a case in which he had amputated the leg of a man, aged twenty-three, who, three years previously, had so injured his knee as to set up such mischief that, at the time of admission, had completely disorganised the joint. Both apices were dull, and respiration 'cogged', especially on the left side (*Lancet*, Oct. 1881, p. 753). On June 7, 1881, the leg was amputated under chloroform, and on July 14, the patient was discharged convalescent, and looking comparatively well. The lung-mischief was not only arrested, but much diminished. An interesting discussion followed the reading of the case. Mr. Bryant replied, and concluded his admirable remarks by stating that in such a case any surgical interference must be trenchant; excision not being put into comparison with amputation. [Several interesting papers are noted at Section 1630:3 of the *Digest*, and since the date of the 1st edition, papers have appeared by Mr. Savory, *Lancet*, Jan. 1878, p. 273; Mr. Bryant, *ibid.*, Jan. 1879, pp. 10, 51; Mr. Maunder, *ibid.*, p. 101; and M. Verneuil, *Med. Times and Gaz.*, Feb. 1879, p. 510.—*Rep.*]

2. *Whitehead on Excision of the Tongue by Scissors.*—Mr. Walter Whitehead, in the *Lancet*, Oct. 1881, pp. 698, 745, gives the histories of twenty-eight cases in which this operation has been performed, and of which Mr. Whitehead claims to have been the originator. The mouth being opened to the full by Mason's gag, the tongue is drawn out by a double ligature, passed through its tip. The operator then divides all the attachments of the

tongue to the jaw and to the pillars of the fauces; then the muscles at the base of the tongue are cut across by a series of short snips, until the entire organ is separated on the plane of the inferior border of the lower jaw; any artery is twisted as divided. For three days the patient is fed entirely by enemata.

3. *Illingworth on Manipulation in Reduction of Dislocated Humerus.*—Mr. Illingworth, in the *Brit. Med. Jour.*, Oct. 1881, p. 626, reports two cases in which dislocation of the humerus into the axilla was readily reduced by the following method. 'The arm being abducted and extended with slight force by an assistant, I firmly grasped the scapula with the right hand over the acromion, and depressed it in such a manner as to make the lower edge of the glenoid cavity slide over the rounded head of the humerus, whilst with the fingers of the left hand I exerted gentle pressure upwards on the shaft of the humerus, just below the head. Reduction was in each case immediate.'

4. *Cousins on Antiseptic Paracentesis, with Trocar for same.*—Dr. J. Ward Cousins, in the *Med. Times and Gaz.*, Oct. 1881, p. 534, describes and figures an ingenious trocar and cannula, with which paracentesis of any part of the body can be performed, without allowing the possibility of any air entering the parts tapped. The instrument is made by Messrs. Arnold and Son, of West Smithfield.

5. *Jones on Successful Gastrostomy.*—Mr. Thomas Jones (*Brit. Med. Jour.*, Oct. 1881, p. 709) reports the case of a woman, aged 21, suffering from stricture of the œsophagus after swallowing nitric acid, in whom the operation of gastrostomy was successfully carried out in the manner described by Mr. Bryant, and reported at p. 202 of the LONDON MEDICAL RECORD. The patient had gained 8 lbs. in weight when she last reported herself.

6. *O'Farrell and Holmes on Wounds of the Lung.*—In the *Lancet*, Oct. 1881, p. 748, are recorded two interesting cases of recovery from severe wounds of the lungs. Surgeon-Major T. M. O'Farrell's case was that of a porter wounded in the late riots at Limerick. A sword-bayonet entered the right axilla, having first penetrated the muscles of the arm. Immediately his mouth filled with blood, and he felt very faint. When seen, twenty minutes afterwards, he was very faint, and complained of great oppression about the chest; his pulse could scarcely be felt, and now and again he gave a short cough, when a stream of blood issued from his mouth. In nineteen days the man was sufficiently recovered to walk about. The case is a good instance of the comparative impunity with which a young and healthy man may receive injuries of so delicate and complex an organ as the lung. Dr. Holmes' case was very singular. A miner, standing at the bottom of the shaft of a mine 225 ft. deep, was wounded by a drill that fell from above. The drill measured three feet in length, and weighed eight pounds and a half. The bit of the drill struck his back near the superior angle of the left scapula, emerging in front, on a line with the left nipple, fracturing the sixth rib. The wound was eight inches and a half in length. The drill passed through the man's body almost up to its head. The patient called upon some of his comrades to pull out the foreign body, and two men laying hold, forcibly extracted it, considerably tearing, in the process, the lung and flesh. When admitted into the hospital the patient was bleeding freely, and in a fainting condition. Air at every respiration passed, with a gush of blood, from each aperture. Sixteen days after the wound, the patient walked out of the hospital to see some street demonstration, and in two months he felt nearly as strong as ever; the lung, however, had shrunk to about two-thirds its natural size. R. NEALE, M.D.

7. *Polaillon on a Modified Operation for Resection of the Lower End of the Tibia and Fibula.*—In all the known operations for tibio-tarsal resection, the first step consists in dividing the fibula above the malleolus and removing the latter. M. Polaillon (*Jour. de Méd. de Paris*, Oct. 15, 1881) maintains that this practice should be avoided, whenever it is possible, by removing the malleolus. The field of operation is uselessly augmented, and the foot is deprived of the point of support indispensable for the re-establishment of its functions. Subperiosteal resection is a great step in advance, for it allows the reconstruction of the mortise if the bone be reproduced; but the osseous reproduction may fail, and in many cases, instead of preserving only the periosteal sheath of the malleolus in the hope of its regeneration, it will be admitted that it is safer to preserve the malleolus itself. To summarise, M. Polaillon proposes to perform tibio-tarsal resection by the following method. First stage—Subperiosteal resection, with the chain saw or chisel, of a segment of the fibula above the external malleolus, which is left attached to the astragalus. Second stage—Loosening of the periosteum from the inferior extremity of the fibula and os calcis; and dislocation of the foot outwards. Third stage—Division of the articular end of the tibia. Fourth stage—Rasping or section of the articular surface of the astragalus, and restoration of the foot to its normal position.

8. *Ehrendorfer on the Excision of a Wedge-Shaped Piece from Various Bones.*—This writer gives (*Wien. Med. Woch.*, Nos. 14-16), the results of five operations of the above nature, performed in Billroth's clinic, and states the following as his conclusions. 1. In talipes equino-varus, frequent correction of the deformity in young patients will usually suffice; only in old subjects and marked supination of the foot is it necessary to perform the wedge-excision after manipulation has failed. The skin-incision lies transverse, and the base of the wedge upward and outward. 2. When, in talipes equinus, ankylosis of the ankle has taken place, the wedge ought to be taken from the tibia. 3. In the case of the knee ankylosed in the flexed position, the wedge ought, in adults, to be taken from the articular extremities; in those who have not reached puberty, above the epiphysis of the femur, in order not to interfere with the growth of the bone. Also, the wedge is rather to be too small than too large. 4. All five cases had a most favourable course, and thus the operation may be justifiably done where the orthopædic treatment does not give the desired result. JAMES ANDERSON, M.D.

ORTHOPÆDIC SURGERY.

RECENT PAPERS.

1. ALLAN, JAMES.—Spinal Caries, with Suppuration not presenting externally: Necropsies. (Four cases, all in aged people.) (*Lancet*, June 25, 1881.)

2. ANDERSON, R. J.—Notes of a Case of Intra-uterine Amputation. (*Brit Med. Jour.*, July 16, 1881.)

3. BAKER, HENRY.—On Congenital Talipes Equino-varus.

4. Beauregard.—Straightening of a Case of Genu Valgum by Osteotomy. (*Rev. de Chirurgie*, 1881, p. 429.)
5. Beauregard. — Genu Valgum : Subcutaneous Linear Osteotomy. (*Rev. de Chirurgie*, No. 1, 1881.)
6. Bennett, E. H.—Osteotomy. (*Surg. Soc. of Ireland*, March 18, 1881.)
7. Berger.—Subperiosteal Excision of the Elbow. (*Rev. de Chirurgie*, 1881, p. 151.)
8. Boyd, Stanley.—Registrar's Report of University College Hospital : Deformities, p. 17 : (Various operations for Genu Valgum, Ankylosis, etc.)
9. Brachet.—Hysterical Hip-Disease Cured by the Magnet. (*Le Progrès Médical*, July 23, 1881.)
10. Brauer.—Contribution to the Treatment of Genu Valgum. (*Betz's Memo.*, 1880.)
11. Brodhurst, B. E.—Observation on the Nature and Treatment of Genu Valgum. (*Proc. Royal Med. and Chir. Soc.*, vol. ix, No. 1.)
12. Bryant, T.—Renewal of Upper Part of Femur after Removal for Necrosis. (*Lancet*, March 12, 1881.)
13. Buzzard.—On the Affection of Bones and Joints in Locomotor Ataxy, and its Association with Gastric Crises. (*Brit. Med. Jour.*, 1881, vol. i, p. 340.)
14. Charcot.—Demonstration of Arthropathic Affection of Locomotor Ataxy. (*Ibid.*, Aug. 13, 1881.)
15. Charcot.—The Osseous Changes in Progressive Locomotor Ataxy. (*Gaz. des Hôpitaux*, Jan. 11, 1881.)
16. Chavasse, T. F.—A Method of Treating Curves of the Tibia in Hospital Out-patient Practice. (*Brit. Med. Jour.*, July 30, 1881.)
17. Depaul.—Deviation of the Vertebral Column : Xiphosis : Pregnancy. (*Gaz. des Hôpitaux*, 1881, No. 7.)
18. De Saint-Germain.—On Torticollis. (*Gaz. des Hôpitaux*, 12 and 14, April 1881.)
19. Desprès.—Treatment of False Joint. (*Le Progrès Médical*, 1881.)
20. Fagge, Hilton.—On Rickets. (*Lancet*, Nov. 20, 1880.)
21. Farabeuf.—Remarks on Berger's Case (*suprà*). (*Rev. de Chirurgie*, 1881, p. 151.)
22. Feurer, G.—Anatomical Investigations in Cases of Spondylitis. (Virchow's *Arch.*, Oct. 7, 1880.)
23. Finlay.—Case of Hysterical Contracture. (*Med. Times and Gaz.*, Sept. 17, 1881.)
24. Fisher, H.—Splint for Bow-Legs in Children. (*Lancet*, vol. i, 1881, p. 276.)
25. Fitzgerald, T. N.—Vicious Union of Fractured Femur, simulating Dislocation on Dorsum Ilii : Successful Operation : (Osteotomy with chisel.) (*Australian Med. Jour.*, April 15, 1881.)
26. Fridolin, J.—Studies Concerning the Growth of Human Limbs after Birth. (*Archiv für Anat. und Phys.*, 1881.)
27. Gosselin.—Blennorrhagic Arthritis of the Knee : Ankylosis. (*Gaz. des Hôpitaux*, Feb. 10, 1881.)
28. Goodhart.—On Rickets. (*Lancet*, Jan. 8, 1881.)
29. Gould, A. P.—Rapid Death after Osteotomy of the Tibia. (*Brit. Med. Journ.*, 1881, vol. i, p. 850.)
30. Gould, A. P.—Case of Congenital Absence of Left Fibula, Cuboid, and Fourth and Fifth Metatarsal Bones. (*Lancet*, Nov. 20, 1880.)
31. Grattan, N.—A Method of more effectually Securing Sayre's Jacket after it has been cut. (*Lancet*, Nov. 20, 1880.)
32. Guyon and Féré.—A Note upon Muscular Atrophy consecutive to some Injuries of the Hip. (*Le Progrès Médical*, April 29, 1881.)
33. Hackett, C. W.—Case of Fractured Spine (in the reporter himself, a medical man): treated by Sayre's Plaster Jacket. (*Boston Med. and Surg. Jour.*, No. 7, 1880.)
34. Hagmann.—On the Origin and Treatment of Lateral Muscular Curvatures of the Spine. (Review in *St. Petersb. Med. Woch.*, Oct. 30, 1880.)
35. Hay, G.—Case of Stiff Knee Cured by Forcible Flexion. (*Philad. Med. Times*, April 23, 1881.)
36. Holl, M.—On the Etiology of Congenital Flat Foot. (*Archiv für Klin. Chir.*, Band xxv.)
37. Holmes, O. W.—On an Hysterical Spine (?) (*Lancet*, Aug. 13, 1881.)
38. Karlsioe, W. J.—Facts in Regard to the Swedish Movement Cure. (*Philad. Med. Times*, Jan. 29, 1881.)
39. Kassowitz, M.—Normal Ossification and the Diseases of the Bones in Rickets and Hereditary Syphilis. (*Med. Jahr.*, 1880.)
40. König.—Scoliosis and Pott's Disease. (*Lehr. des Spec. Chir.*, Berlin, 1881.)
41. Kormann, E.—Upon Malformations of Intra-uterine Origin, and their Relation to Spontaneous Amputation in the Fœtus. (*Jahr. für Kinder.*, 1880, Band xv, Heft 3 and 4.)
42. Küster.—On the Treatment of Fracture of the Spine. (Congress of German Surgeons, 1881. See *London Med. Record*, July, p. 286.)
43. Küstner, O.—A Case of Congenital Genu Valgum in an otherwise well-formed Infant. (*Rev. de Chirurgie*, 1881, p. 443.)
44. Lancet.—Leading Article on Rickets. (Nov. 20, 1881.)
45. Lannelongue.—Incipient Hip-Disease : Tubercle of the Bone. (*Rev. de Chirurgie*, 1881, p. 156.)
46. Ledentu, M.—Intra-uterine Rickets. (*Rev. Méd.*, 1881, July 30.)
47. Lee, B.—Some Tabular Results of the Movement Cure. (*Phil. Med. Times*, Feb. 26, 1881.)
48. Leroux.—Amputations and Excisions in Phthisical Patients. (*Rev. de Chirurgie*, 1881, p. 176.)
49. Macewen, W.—Transplantation of Bone. (*Proc. of Roy. Soc.*, vol. xxxii, No. 213.)
50. Marey.—Studies of the Gait of Man. (*Compt. Rend.*, tome xci, 1880, p. 261.)
51. Ménard.—Experimental Investigations into Delore's Treatment of Genu Valgum. (*Rev. de Chirurgie*, Sept. 1881.)
52. Morris, H.—Specimen of Genu Valgum. (*Brit. Med. Jour.*, May 21, 1881, p. 809.)
53. Morton, T. G.—Club-Foot. (*Phil. Med. Times*, Jan. 29, 1881.)
54. Morton, T. G.—Complete Osseous Ankylosis of Knee Treated by Removing a Wedge of Bone. (*Phil. Med. Times*, March 12, 1881.)
55. Nicaise.—Plastic Ankylosing Arthritis of the Knee. (*Gaz. des Hôpitaux*, 25 Jan. 1881.)
56. Ollier.—Excision of the Hip Considered with Regard to the Indications for it, and its Final Results. (*Rev. de Chirurgie*, 1881, Nos. 3, 5, and 7.)
57. Owen, Edmund.—Quiet Vertebral Caries. (*Brit. Med. Jour.*, 1881, vol. i, p. 920.)
58. Parrot.—Syphilitic Fractures of the Bones in Children. (*Gaz. des Hôpitaux*, May 3, 1881.)
59. Perier, E.—Congenital Dislocation of the Knee : the leg completely bent back upon the thigh in a new-born child. (*Rev. de Chirurgie*, 1881, p. 152.)
60. Pipino.—Treatment of Club Foot. (*Betz's Memo.*, 1880, p. 370.)
61. Pravaz.—The Etiology of Congenital Dislocations of the Femur. (*Gaz. de Hôpitaux*, June 11, 1881.)
62. Pye, Walter.—Deformity from Overgrowth of Ulna : Operation. (*Brit. Med. Jour.*, March 5, 1881.)
63. Rigal and Vignal.—Experimental Investigations into the Origin of Callus, and into the Changes in the Tissues of False Joint. (*Arch. de Phys.*, 1881, Nos. 3 and 4.)
64. Rivington, W.—Spasmodic Wry Neck : Excision of a Portion of the Spinal Accessory Nerve : Death from Erysipelas. (*Brain*, July 1881.)
65. Scarenzio.—Joint-Disease caused in a Reflex Manner by Urethritis. (*Giorn. Italiano del Mal. Vener.*, 1880.)
66. Servais and Deneffe.—Report of the Commission on a paper of Dr. Servais on Subcutaneous Division of the Neck of the Fermur in order to destroy Ankylosis of the Hip Joint in a Bad Position. (*Bull. de l'Acad. Roy. de Méd. de Belgique*, 1881, No. 5.)
67. Swain.—Hints on the Application of the Poro-

plastic Jacket in Spinal Curvature: Illustrated. (Reprint of a paper in the *Lancet*, 1880.)

68. TOURNEAUX and MARTIN.—A Contribution to the History of Spina Bifida. (*Jour. de l'Anatomie*, 1881, No. 1.)

69. TROMMSDORF.—The Poroplastic Jacket. (*Bete's Memor.*, 1880.)

70. TYSON.—Cross-Legged Progression. (*Lancet*, April 30, 1881.)

71. VARIOT, G.—Note on the Structure and Development of Subungual Exostosis of the Great Toe (with three illustrations.)

72. VIERORDT.—On Automatic Registration of the Gait. (*Centralb. für die Med. Wiss.*, No. 14, 1880.)

73. VINCENT, D. E. — Some Recent Works on the Osseous System. (*Rev. Mens. de Méd. et de Chir.*, Oct. 1880.)

74. VOLKMANN.—On Flat Foot in Young Children. (*Centralb. für Chirurgie*, Feb. 12, 1881; *Med. Times and Gaz.*, March 26, 1881.)

75. 'E. G. W.'—A Case of Talipes Equinus following Acute Rheumatism in a Girl, aged 6. (*Lancet*, April 23, 1881.)

76. WALDBURG.—Sayre's Plaster Corset. (*Memor.*, 1880, p. 324.)

77. WALSH, J. F.—Case of Pott's Disease in the Adult treated by the Plaster Bandage: Recovery. (*Phil. Med. Times*, March 12, 1881.)

78. WEBB, J. H.—Inflation of Devitalised and Carbolised Air as a Treatment of Spinal Curvature and Abscess. (*Australian Med. Jour.*; Abstract by W. Thomson in *Dublin Jour. of Med. Science*, 1881, p. 146.)

79. WILLETT and WALSHAM.—An Account of the Dissection of the Parts removed from the Body of a Woman the subject of Congenital Malformation of the Spinal Column, Bony Thorax, and Left Scapular Arch: with Remarks on the Probable Nature of the Defects in Development producing the Deformities. (*Med.-Chir. Trans.*, vol. lxiii.)

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3. *Baker on Congenital Talipes Equinus.*—The author describes a varus splint used by himself at the Royal Orthopædic Hospital, and differing from Tamplin's in the following points: 1, the addition of an inner wing; 2, the projection of both wings well below the foot-plate, with connecting strap; 3, the rigid toe-bar attached to the sole plate; 4, leather-padded ankle-strap: and 5 (the most important of all), the movable pad which forms the fulcrum.

19. *Desprès on False Joint.*—Desprès relates cases of ununited fracture in the lower limb, cured by applying an immovable apparatus, and permitting the patient to walk about with it. The paper (read at the Société de Chirurgie) was discussed by Lannelongue, Anger, and Trélat.

29. *Gould on Rapid Death after Osteotomy of the Tibia.*—The case occurred in a boy aged eight years. The author was of opinion, in which Mr. Lister concurred, that the cause of death was carbolic acid poisoning.

33. *Hackett on Fractured Spine treated by Sayre's Plaster Jacket.*—Dr. Hackett states, on October 15, 1877, in switching from a main track to a branch, the train going round a curve at a rapid rate, while he was standing in the rear of the car, he was violently thrown upon the corner of a stove, and instantly paralysed below the waist, probably by a fracture of one of the lumbar vertebræ, presumably the third. There were complete paralysis of motion in both legs, partial loss of sensation, a sense of constriction, as of a tight band, at the lower part of the abdomen, and incessant and severe pain at the point of injury. After ten weeks there was some return of sensation, with ability generally to evacuate the bladder voluntarily; and improvement in motor power, commencing about five months after the injury, had so far advanced by a twelvemonth after the injury, that 'the limbs could be drawn up and pushed down in the bed, and even be made to move as in walking, with the body supported on crutches and by an attendant; but only a trifling amount of weight could be sustained by them.' Numerous abscesses formed, discharging not only externally, but also through the rectum. Four or five pieces of bone escaped. These abscesses caused great suppuration and great pain, and also loss of ground as regarded recovery from the paralysis. Sensation was now almost annihilated, even the power of telling heat from cold. The muscles did not respond to electricity 'more than would those of a man recently deceased'. Under the use of iodide of potassium the abscesses healed, and electricity and friction, daily employed, benefited the patient, so that by the autumn of 1879, he says: 'I was able to get a part of my weight on my feet by supporting myself on crutches or over the back of a chair'. Still, he could only leave his bed for a short time, and not every day; and he was suffering all the time from intense pain, which compelled him to take from one to three grains of morphia daily, to keep even bearably comfortable. On November 30, 1879, Drs. Lewis A. Sayre and L. H. Sayre suspended him and applied a plaster-of-Paris jacket. 'The relief from pain and the improvement in the sensation and motion of the limbs produced by extension indicated the probability of benefit by this mode of treatment.' 'The result was a perfectly accurately fitting case, which gave perfect and even support to the whole trunk, and complete and absolute rest to the injured and diseased parts.' Three days afterwards, he could walk about the room without mechanical support, and two days later went out in the street for his first walk for more than two years. Sensation became nearly normal, the frequent muscular spasms entirely ceased, control of the bladder became perfect, and the action of the bowels became much more nearly normal. The limbs recovered their natural warmth. In six weeks' time he was able to reduce his daily allowance of morphia to less than half what it had been. He was able to walk as much as a quarter of a mile without artificial aid of any kind, except the *moral* support of a light bamboo cane. Dr. Hackett writes: 'On removing the jacket, January 13, I found myself unable to walk across the room without support of some kind, while there was a marked increase of pain. There was also a perceptible change in the form of the trunk, it being two inches smaller around the waist, probably by absorption from lateral pressure of the jacket above the ilia, where it had been crowded in to get a point of support to maintain extension. Upon the application of a new plaster case, there were immediate relief of the increased pain and return of the use of the legs as before, with considerable improvement in their action (the new jacket being a better fit than the first, if possible, showing most clearly the need of and the great benefit derived from the extension and support of the plaster-of-Paris jacket.' On February 1, Dr. Hackett writes: 'I can now raise myself on the toes by voluntary contraction of the extensor muscles of the feet'.

49. *Macewen on Transplantation of Bone.* Before Macewen's experiments, the only authentic instance of successful transplantation of bone was that in which Ollier exchanged pieces of the radial diaphysis in a rabbit eight months old. Immediate and perfect union ensued in the right radius, but in the left suppuration set in and the bone wasted, leaving

the periosteum adherent and ossifying. In March 1874, Dr. Macewen 'transplanted a portion of one of the flat bones of the canine skull into a gap in the skull of a man. Two-thirds of the graft remained in the tissues, apparently becoming incorporated with them, and forming a firm hard layer. No opportunity was afforded of demonstrating by an incision the exact condition of the graft.' Dr. Macewen, in an historical *résumé*, says that the position of transplantation of bone is as follows. 'In the lower animals, Ollier has transplanted periosteum and osseous tissue; and, among many failures, he succeeded in one instance in forming an osseous ring from grafted periosteum, and in another in transplanting a portion of bone from the one radius to the other of the same animal. Wolf, of Berlin, repeated Ollier's experiments, and stated that he never obtained an osseous growth from any transplant. In man there have been several attempts to transplant periosteum and bone, which, with one exception, have been attended with failure. The exception—the case mentioned of grafting dog's bone into a human skull—has not been clearly demonstrated.' The problems to be solved were these. 1. Will bone grow after transplantation? 2. Are the facts derivable from animals applicable to man? 3. If the first two questions be answered in the affirmative, can any practical result ensue? Dr. Macewen, in his surgical practice, met with various facts tending to encourage hope concerning the transplantation of bone. In various cases of compound fracture treated antiseptically, pieces of bone, some with and others without periosteum, having been entirely separated, were replaced either in their original position or in a different locality, lived, and grew. Portions of fingers and toes have re-united after being completely detached. In proceeding to experiment, it was determined that the graft should consist of the whole of the osseous elements, periosteum, calcareous matter, and medulla. 'In order to place transplanted bone in the most favourable condition for living, it ought to be divided into small pieces, so that the blood effused from the intermuscular space into which the bone would be implanted, may permeate between the individual fragments, and thereby afford a medium for the establishment of vascular connections, and the supply of nutriment to the individual pieces of bone. Moreover, any portion of the graft which was not suitable could then be easily thrown off without involving the whole. Other grounds for the division of the osseous transplant into small portions are as follow. The blood-clot itself, when small in quantity, forms an excellent matrix for the proliferation of the steogenic elements. The division of the bone into small pieces also supplies a greater number of proliferating centres. The division of the hard calcareous walls of the Haversian canal, gives the osteogenic cells therein contained room to proliferate: and the graft, when composed of small portions of bone, can be more easily moulded into the shape desired.' The author then relates a case in which transplantation was successfully performed. The whole shaft of the right humerus having necrosed in a weakly neglected child three years old, and the strength diminishing, while the local state showed no improvement in spite of treatment, it was determined to remove the sequestrum. 'The tunnels left by the withdrawal of the bone were kept patent as long as possible, but they slowly coalesced from the epiphysis toward the superficial openings without the formation of new bone, except for a short distance from the head of the humerus.' In December 1878 (five months after admission into hospital), there was no sign of any attempt to restore the lost diaphysis, other than a downward growth of about 1¾ inches from the head of the bone. The measurement to the acromion from the apex of this growth, which tapered downwards, was 2 inches. The child was seen monthly for some time, but no further growth of bone followed. On November 7, 1879, nearly a year and three months after the removal of the necrosed shaft, the bone had grown no more. On November 9, the first transplantation was performed. To quote from the author's own *résumé*. 'In making the sulcus for the reception of the graft, reliance had to be placed on the anatomical relations as to the correct position for the graft, as there was no trace of periosteum or of fibrous structure to indicate the former situation of the bone. Portions of human bone were transplanted on three different occasions. The grafts were obtained from patients affected with anterior tibial curves, from whom wedges of bone had to be removed for the purpose of straightening their limbs. These osseous wedges, with their periosteum, were each divided, after removal, into many small pieces, which were immediately placed in the sulcus prepared for them in the boy's arm. These small portions united together and adhered to the head of the humerus above and the condyles below, ultimately forming a solid rod, only half an inch shorter than the humerus of the opposite side. The transplantation of bone converted an useless arm into a thoroughly useful one.' In reply to critics who suggest that the transplants merely stimulated remanent old periosteum to produce the new bone, it is pointed out that (1) for fifteen months no new bone grew; (2) no signs of old periosteum were discovered when the groove of soft tissues was made to receive the grafts; (3) the growth of new bone was at first only commensurate with the transplants; (4) the solid humerus still retains the irregularities of shape which the transplants were permitted to assume in the tissues. The author finally states the following conclusions: 1. Transplanted bone is capable of living and growing. 2. Interhuman transplants of bone live and grow. 3. Interhuman osseous transplants are capable of being put to practical uses beneficial to mankind. 4. The whole of the osseous elements ought to be included in the transplants. 5. The most successful mode of transplanting bone is to divide it into small fragments with a sharp instrument before inserting it into its new situation. 6. In order to insure the success of the graft, the transplantation must be conducted antiseptically.

53. *Morton on Club-Foot.*—At a meeting of the Philadelphia Academy of Surgery (*Phila. Med. Times*, June 29, 1881), Dr. Morton exhibited some cases of club-foot treated, from soon after birth, by manipulation and 'the wearing of proper shoes', without tenotomy. The results were good. In cases seen in infancy he attempted, and was usually able, to cure the talipes without tenotomy, except in some instances of talipes equinus. When he was obliged to divide the tendo Achillis, he did not do it until the child began to walk. In the discussion which followed, Dr. S. W. Gross thought the ordinary method of operating useless, and the usual method of applying the shoe, a barbarity; still he believed that division of the tendo Achillis was preferable, because it hastened cure. The varus should be overcome by manipulation first, and the heel then brought down. After manipulation had been begun, the foot may be kept in place by adhesive plaster carried around the

foot and up the leg. Dr. D. Hayes Agnew considered no operation wise at an earlier age than one year, but in the meantime it was well to correct deformity and develop the paralysed muscles by manipulation.

54. *Morton on Complete Osseous Ankylosis of Knee treated by Removing a Wedge of Bone.*—Dr. Morton writes, in the course of remarks on this case (*Phil. Med. Times*, March 12): 'It has now become a common procedure in my practice, in treating different angular deformities with ankylosis at the hip, after anæsthesia, to have the pelvis well secured, then to forcibly fracture the neck of the femur, and then to apply extension in a straight positon, and treat it as an ordinary fracture. This has, in a large number of cases, replaced excision, simple section, and other modes of treatment, and I have never had any unfavourable symptoms arise, but good has been the invariable result'. [It is most desirable that the whole of these cases should be published in detail. —*Rep.*]

62. *Pye on Deformity from Overgrowth of Ulna.* —The author (*Brit. Med. Jour.*, March 5, 1881) considers the case to be pathologically related to osteitis deformans. The curvature began to return shortly after the operation of osteotomy.

66. *Servais and others on Subcutaneous Division of the Neck of the Femur for Ankylosis.*—A committee of the Belgian Royal Academy of Medicine has sent in the following interesting and critical report on a case of Adams's operation of 'subcutaneous section' of the neck of the femur for rectangular ankylosis of the hip. 'A young man, aged 23, with one hip ankylosed in a bad position, came to M. Servais to have the condition remedied. When standing erect, he could not touch the ground with the toes of his left foot, unless his back were enormously hollowed. When lying supine with the back flat, the left thigh was perpendicular. Walking was difficult. He had borne with his deformity for twenty years, but in 1879, he wished to marry, and love brought him to the consulting-room of M. Servais, who proposed to him the operation. (Then follows a brief history and description of Adams's operation.) In M. Servais' operation, the section of the bone by sawing occupied three-quarters of an hour. The limb was afterwards placed *dans une position physiologique*, and over the wound was applied a compress wet with a solution of arnica (6 to 100). The limb was enveloped in plaster-wadding ('gypso-ouaté'). This dressing was removed in five days, and extension was resorted to. All went well for twenty days, when the patient became intractable, got up without leave, and a serious accident resulted. The fragments of the freshly divided femur wounded either the femoral artery or one of its large branches, and an alarming hæmorrhage came on. Informed of this occurrence twelve hours afterwards, M. Servais, without hesitation, tied the femoral artery below Poupart's ligament. The hæmorrhage ceased, but another danger supervened. Blood was extensively infiltrated, the patient was weak, and inflammation attacked the thigh. Large incisions, drainage, and an internal treatment by tonics, successfully combated this inflammation; the patient was saved. Towards the end of the second month, M. Servais applied Taylor's apparatus; on the seventy-fifth day the patient left his bed. From the sixth month the young man's condition was excellent. The success of the operation was henceforth undeniable. The deformity has gone, the man walks without limping and without apparatus; the limb has developed since the operation. The union of the fragments is very firm; but, from time to time, a small opening appears, and gives egress to a few fragments of bone. The general state is better than before the operation. For more than a year, the young man has resumed his work as a lapidary. If this operation shows the ability of the operator, it shows also the dangers which the operation caused this young man to run. If we add to his risks a case of death from purulent infection, and another case of death from hæmorrhage, resulting from a wound of the femoral artery, it will be seen, perhaps, that for a list of fifty cases of 'subcutaneous division of the neck of the femur', the account of accidents which may complicate this operation is already serious. The committee are astonished that this deformed ankylosis of the hip, existent throughout the period of growth and of development, has not brought with it a shortening of the limb, capable of impeding walking, in spite of the operation. We regret that in his work, unfortunately very curtailed, the excellent English surgeon has told us nothing about this point. Without accepting, concerning the benignness of "subcutaneous section of the neck of the femur", the opinions of MM. Adams and Servais, the committee judge that this operation is indicated in the cases where a vicious ankylosis of the hip makes the limb useless. But the surgeon ought to be well persuaded, and he should not permit the patient or his friends to remain ignorant that the operation is serious, and he should only operate when asked. In the case of deformed ankylosis of the hip, surgeons have put in practice, for many years, a method less dangerous than that of Adams, viz., fracture of the neck of the femur. Nélaton, Péan, Tillaux, and many others, have been most successful with it. We are the more compelled to recall this success, because it has been gained with less risk to the patients.' [In the course of the subsequent discussion, it appeared that the committee had never seen the patient whose case is the subject of the report.—*Rep.*]

67. *Swain on the Application of the Poroplastic Jacket in Spinal Curvature.*—This pamphlet contains a useful account of the method of applying Cocking's poroplastic jackets. It informs us that 'his' (Mr. Cocking's) 'attention was drawn to Prof. Sayre's plaster-of-Paris jackets, and he conceived the idea that his poroplastic felt might be used for the purpose of forming spinal supports, having this great advantage over the plaster-of-Paris jacket, viz., that of being easily removed from the patient, and re-applied'. [As a matter of fact, the plaster-of-Paris can be removed and re-applied quite as often as is good for the patient, and with perfect ease, provided only that use be made of the system of triple-lacing, long ago introduced by the reporter into Mr. Marsh's out-patient department at St. Bartholomew's Hospital.—*Rep.*] Further on, the author tells us that 'herein is the special advantage of this method of spinal support, that its use does not preclude the further use of other curative methods. I allude especially to extension by suspension and gymnastic exercises'. [This is an assumption which has been made by other surgeons besides Mr. Swain, but which can only be based on defective knowledge of what is consistent with Sayre's plaster-of-Paris jacket. The plaster jacket can easily be removed, and both suspension and gymnastic exercises can be freely used without removing it at all.—*Rep.*] By far the greater part of Mr. Swain's pamphlet consists of practical directions and warnings regarding

the use of the poro-plastic apparatus. Measurements are to be taken at the axilla, the waist, the pelvis, and from the axilla to the great trochanter, as well as accurate notes of the position of the curve, especially if angular, and of such bony processes as the anterior superior spine of the ilium. The upper and lower borders and the area over the breasts, are to be left soft. The patient is prepared much as for the application of the plaster corset, but with two jerseys, and without cotton-wool pads. Instead of a collar for suspension, a broad piece of soft felt is used beneath the chin, with a felt strap and a buckle passed round the back of the head. 'Care should be taken not to double up the ears under the strap, and I find that a little cotton-wool here and there adds to the comfort.' When a jury-mast is used, care must be taken 'that the iron rod of the jury-mast does not take a too prominent anterior curve just above the jacket. If this be the case it will press on the occiput, and very soon cause a troublesome sore.' In the absence of a proper steam-bath, the kitchen oven, with a crock of boiling water in it, may be used to soften the jacket. If the oven be used, a little water should also be sprinkled over the jacket. The temperature should be about 170 deg. to 180 deg. 'Although the felt very soon becomes soft, it does not become thoroughly plastic for some little time.' Two persons are required to fit the jacket well. 'The surgeon should take charge of the back.' 'The middle buckle, which will be generally found to tighten the jacket round the waist, is the first and most important one to secure.' 'The pelvic buckles should be the next closed, and, lastly, the thoracic ones.' 'During all this time the surgeon is moulding the jacket to the form posteriorly.' The author has 'found, after some practice, that the best way to accomplish this is to encircle the patient with an arm, placing one hand in front as an opposing force, whilst with the other hand you knead the material into the figure, using principally the ball of the thumb'. 'I have found that a slight knock on the jacket with the knuckles tells me if it is "well home".' 'To insure a perfect fit at the waist, the assistant encircles the jacket at that point with a strap of soft felt, by which he is able forcibly to squeeze it into the figure.' The patient must be kept perfectly still for half an hour after the application, in order to let the jacket become quite firm. The after-treatment is of great importance. This involves frequent removal of the jacket for exercise. It should always be re-applied during suspension. Daily suspension is used. For some time, the jacket is worn night and day. From time to time the jacket should be re-moulded.

74. *Volkmann on Flat Foot in Young Children.*—Volkmann (*Centralb. für Chir.*, Feb. 12, 1881) classifies flat foot occurring in young children under three heads: 1. Congenital, dependent upon uterine pressure; 2. A form due to too rapid change into the position of the adult foot; 3. Rachitic flat foot, appearing sometimes before the child begins to stand; 4. Paralytic flat foot. C. Hueter is of opinion that the alteration of the shape of the foot from the slight supination seen in a new-born child into that seen in the adult, is the result of the pressure due to the weight of the body. The axis of the astragalo-calcaneal joint is so placed, that the weight of the body in walking tends to evert the foot. Volkmann rejects the idea that this fact is the cause of the flat foot of children, for the reason that this eversion takes place before children learn to stand, and in the first months of life the foot may be in a position more pronated than is normally seen in adults; and he concludes that, under ordinary circumstances, the weight of the body in walking and standing has nothing to do with this change of shape of the foot. In newly born infants the bones have a different shape from that of adults, and the changes which occur during growth are independent of static laws. As an example of changes in the growth of the limb which take place in opposition to the effect from the weight of the body, the increase in the angle of the neck of the femur with the shaft may be quoted, and also the hollowing out of the arch of the foot. There is, however, a form of flat foot which has been termed 'static flat foot', where, in addition to the eversion, a sinking of the arch is to be seen. This change is distinct from that which causes eversion, and which is dependent upon similar influences to those which, working in another direction, prevent in talipes varus and equino-varus the partially corrected deformity from remaining without relapse if the acts of standing and walking alone be relied upon.

78. *Webb on Inflation of Devitalised and Carbolised Air in Spinal Curvature and Abscess.*—The author (*Australian Med. Jour.*) recommends the treatment named in the title. He places crystalline carbolic acid in a Florence flask, melts it, and then forces air through the acid and into the abscess-cavity with a Richardson's spray producer.

C. B. KEETLEY.

PATHOLOGY.

RECENT PAPERS.

1. SENATOR.—Case of Acute Miliary Tuberculosis with the Distinct Type of Typhoid Fever. (*Berl. Klin. Woch.*, June 20, 1881.)

2. ORTH.—Connection of Pulmonary Consumption with Acute Miliary Tuberculosis, and with Tuberculosis in General. (*Berl. Klin. Woch.*, Oct. 17, 1881.)

3. QUINCKE. — (Esophageal Ulcer from Digestion. (*Deutsches Archiv für Klin. Med.*)

4. EDGE, A. M.—Hydatid Tumours in the Liver of a Child. (*Lancet*, Oct. 1881, p. 747.)

5. COCKLE.—On Malignant Disease of the Lung. (*Med. Times and Gaz.*, Oct. 1881, p. 518.)

6. DESPLATS.—On Lymphadenoma of the Mediastinum. (*Jour. des Sciences Méd. de Lille*, Aug. 1881.)

7. CHIARI.—Cystosarcoma of the Parotid Gland with Metastases in the Lungs. (*Wiener Med. Jahr.*, 1881, Heft 1.)

8. CHIARI.—Development of Lymphatic Disease in the Urinary Passages. (*Ibid.*)

1. *Senator on a Case of Acute Miliary Tuberculosis exactly simulating Typhoid Fever.*—Senator details in the *Berl. Klin. Woch.* (June 20, 1881) the case of a male patient, aged 42, a messenger, who had all the appearances of typhoid fever (including rose-coloured spots), but *post mortem* was found to have been suffering from generalised miliary tuberculosis, the Peyer's patches being unaffected. He had been in the hospital before for severe typhoid fever, from Sept. 25, to Nov. 5, 1877, and was discharged cured; well in the interval. In the first days of Sept. 1880, he was taken with slight shivering, pains over the liver, and dyspnœa, and was several days in bed. Afterwards, he had weakness, loss of appetite, and feeling of fulness in the epigastric region These symptoms increased ten days before his admission, and the pains over the liver especially so.

There was no jaundice, nor fever. His family history was good. He had had no previous illness until the before-mentioned typhoid; and had led a temperate life. On admission, he was a fairly well-formed and well-nourished man, with no appearance of cachexia. The epigastrium was painful on deep pressure, especially towards the right. Neither the spleen nor the liver were enlarged; there was nothing unusual in the circulatory and respiratory systems (no cough nor expectoration); tongue coated white and moist; constipation; the urine not albuminous, cloudy from urates. Pulse 80 to 84. Temp. 100.4 F. Four days after (Oct. 29), he had moderately high fever, with considerable remissions in the morning; the spleen was enlarged. On Oct. 31, there were observed for the first time several quite distinct roseolar spots. Next day, there were more spots; the abdomen was distended; he had bleeding from the nose, and, on Nov. 16, much bleeding from the nose and mouth. On Nov. 17, on the back of the right hand were several painless patches of erythematous redness, of the size of a florin. For the three or four days preceding death, there were cyanosis, and swelling of the left parotid gland; and pus was expressed from the duct. Death occurred on Nov. 22. The fever-curve, swelling of the spleen, and rose-coloured spots led to a diagnosis of typhoid fever. No doubt, he had had typhoid three years before; also the morning remissions of the temperature were extreme, and in the fourth or fifth week the high temperature still continued. At that time, miliary tuberculosis was thought of, and the fundus of the eye was searched for tubercles unsuccessfully. Finally, when suppuration in the parotid occurred shortly before death, all doubts about the case being one of typhoid disappeared. *Post mortem*, there was not a trace of typhoid fever, nor any evidences of the typhoid three years before. But there were miliary tuberculosis of both lungs (the lung-substance being otherwise normal, except in the upper lobe on each side, where there was an indurated and contracted spot), tuberculosis of the bronchial glands, which were much enlarged and partly caseous, of the spleen, of both kidneys, and of the liver. The head was not allowed to be opened. The second part of the communication is occupied with a discussion of the case, and of the already recorded cases that come nearest to it.

2. *Orth on the Connexion of Pulmonary Consumption with Tuberculosis.*—Orth of Göttingen discusses in the *Berl. Klin. Woch.* Oct. 17, 1881, the question of the connexion of pulmonary consumption with acute miliary tuberculosis, as well as with tuberculosis in general. In the experiments (recorded in Virchow's *Archiv*, vol. lxxvi, 1879) whereby he produced a tubercular disease in rabbits by feeding them for a considerable period with the so-called pearl nodules from tuberculous cows, he found that the induced tuberculosis existed in various organs, and that in the lungs it was associated with, and, in fact, somewhat overshadowed by, caseous pneumonic processes, both catarrhal and croupous. He regards these pneumonic conditions, found side by side with tubercles, as belonging to the infective process. He would accordingly interpret the morbid appearances in the phthisical human lung by the light of that experimental evidence, and take both the interstitial tubercles and the extensive caseous pneumonic processes associated with them, or either of those conditions by itself, as due to tuberculous infection. He inclines to think that there is a specific tuberculous virus, which may be of an 'organised' nature, and he would place tuberculosis side by side with typhoid fever, the septic processes, etc., in the intense forms of which nodular formations in various organs are found, while they are wanting in the milder forms, and also beside diphtheritis, which shows its effects in equally various ways. He also recognises the often quoted analogy between tuberculosis and syphilis. It would be as fallacious to conclude that tubercle-nodules are the only sure criterion of tuberculosis, and that where there are no tubercle-nodules there is no tuberculosis, as to conclude that gummata are the only sure criterion of syphilis, and that there is no syphilis where there are no gummata. C. Creighton, M.D.

3. *Quincke on Œsophageal Ulcer from Digestion.*—Professor Quincke of Kiel published some time since observations to show that ulcers may occur in the œsophagus from the action of the gastric juice. Three cases are now (*Deut. Archiv für Klin. Med.*) published in support of this. 1. The first case was that of a patient suffering from cancer of both ovaries. The ulcer was in the lower part of the œsophagus; and in this, as in the other cases, the absence of cancer at the spot was proved by microscopic examination, as was also the possibility of corrosion *ante mortem* or digestion *post mortem*. 2. The second was that of a patient affected with ovarian cyst, in whom an œsophageal ulcer in the lower half had perforated into the right pleural cavity. 3. The third case was that of a man, 50 years of age, cachectic, and to all appearance suffering from cancer. The *post mortem* examination, however, showed the cause to be marked narrowing of the œsophageal opening of the stomach by a cicatricial stricture, evidently the remains of a previous ulcer involving the neighbouring mucous membrane, and giving rise to muscular hypertrophy of the œsophagus and chronic swelling of its mucous membrane. James Anderson, M.D.

4. *Edge on Hydatid Tumour in the Liver of a Child.*—Dr. A. M. Edge, in the *Lancet*, October 1881, p. 747, reports the case of a child, aged 4 years, who was admitted into the Southern Hospital at Manchester, with a tumour in the region of the liver, which was aspirated, and proved to be of hydatid origin. In two months all trace of the cyst had disappeared. Dr. Edge concludes his paper with a history of similar cases. [A case is reported in the London Medical Record, Aug. 1878, p. 349, in a child, aged 3½ years.—*Rep.*]

5. *Cockle on Malignant Disease of the Lung.*—In the *Med. Times and Gaz.*, Oct. 1881, p. 518, Dr. Cockle reports an interesting case of cancer of the left lung in a cook, aged 44, who, two months before admission, caught a severe cold, attended with cough, and pain in the left side. About a teaspoonful of blood was expectorated at this time, and the sputa remained tinged for some days subsequently. The patient was a fairly healthy-looking woman on admission, but stated that during the last six months she had lost nearly three stone in weight. There was absolute dulness over the whole of the left chest, and the heart was displaced downwards and to the right. Temperature was from 98 to 100 deg.; respiration, 30 to 50. At the end of two months the chest-symptoms remained unaltered, and, a week before death, she began to improve; her appetite came back, and she rapidly gained flesh. One day whilst sitting on the night-stool, she suddenly died. At the necropsy, a large cancerous mass was found occupying the position of the left lung, having started

from its root, and growing along the bronchi (both inside and out). The left pulmonary vein was obliterated, and filled with the growth. The pericardium was full of dark fluid-blood, the origin of which it was difficult to trace. A large mass of cancerous growth was found in front of the left kidney, growing apparently from the lumbar glands. The perfect latency of all abdominal symptoms, with so large a mass of cancer growing therein, was, to say the least, very remarkable. The sufferings were always exclusively referred to the chest.

RICHARD NEALE, M.D.

6. *Desplats on Lymphadenoma of the Mediastinum.*—A woman, aged 27, admitted to the Sainte-Eugénie Hospital at Lille, on Sept. 12, 1877 (*Jour. des Sciences Méd. de Lille*, Aug.), had intense dyspnœa, signs of asphyxia, and absolute dulness before and behind, throughout the whole of the left side of the chest, with deviation of the heart to the right. Thoracentesis gave issue to two litres of liquid, and relieved the patient, but did not remove the subclavicular dulness of the left side. On the right side, resonance was normal, but there were a souffle and egophony at the base in front and behind. The heart had deviated to the right. In the right subclavicular fossa a voluminous mass of hard indolent glands was noted. Those of the left clavicular fossa were less tumefied. The urine was loaded with albumen, and the mucous membrane of the mouth was the seat of deep and extensive ulcerations. On the 15th, a fresh puncture was made, after which general improvement was noted. On the 26th, asphyxia again appeared, and the patient died on October 2. At the necropsy, a white hard mass was found filling the left pleural cavity; it had pushed downwards the whole of the left lung. The other viscera did not show any special change. Microscopical examination of the tumour showed that it was constituted by stelliform connective elements, forming by their anastomoses a stroma of which the meshes surrounded the lymphatic cells. Histological examination, therefore, left no doubt of the existence of a lymphadenoma of the glands of the hilus of the left lung.

7. *Chiari on Cystosarcoma of the Parotid with Metastases in the Lungs.*—H. Chiari (*Med. Jahr. der K.-K. Gesell. der Aerzte zu Wien.*, 1881, Heft 1) describes a case of that tumour called cystosarcoma phyllodes, by Müller. It was taken from the parotid gland. Twenty days after the operation the patient died of facial erysipelas and bilateral pneumonia, and at the necropsy the lungs were found to be studded with metastatic patches of the same nature as the tumour.

8. *Chiari on the Development of Lymphatic Tissue in the Urinary Passages.*—The author (*Med. Jahr. der K.-K. Gesell. der Aerzte zu Wien.*, 1881, Heft 1) records eight cases in which lymphatic tissue was found throughout the mucous membrane of the urinary system. One case was tuberculosis; the next, suppurative nephritis; the third, croupous pneumonia; the fourth, peritonitis; the fifth, a scalp wound; the sixth, pneumonia with universal syphilitic glandular swellings; in the seventh case, the cause of death is not given; and the last was a case of Bright's disease. In health, there are no lymphatic tissues in the mucous membrane of the urinary tract, and, from its presence in these cases, Chiari thinks that it may arise under abnormal conditions.

G. A. GIBSON, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1. SCHERPF.—On the Etiology and Symptomatology of Mental Diseases in Children. (*Jahr. für Kinderh.*, vol. xvi, pt. 3 and 4.)

2. HIRSCHSPRUNG.—A Peculiar Localisation of Acute Rheumatism in Childhood. (*Ibid.*)

3. DEMME.—Pilocarpin in Scarlet Fever and Diphtheria. (*Ibid.*)

4. FÖRSTER.—On the Management of Fever in Children. (*Ibid.*)

5. VOLLBRECHT.—On Vaccinal Erysipelas. (*Ibid.*)

6. COEN.—Anomalies of Speech in Childhood. (*Archiv. fur Kind.*, vol. ii, pt. 8 and 9.)

7. FILATOFF.—On Benzoate of Soda in Diphtheria. (*Ibid.*, pt. 6 and 7.)

8. SEILER.—Ascites in Childhood. (*Berlin. Klin. Woch.*, June 27, 1881.)

9. STRANGF.—Notes of 100 cases of Chorea. (*Brit. Med. Jour.*, July 16 and 30, 1881.)

10. BYERS.—Rötheln, its Symptoms and Nosological Position. (*Ibid.*, July 16.)

11. EDIS.—Hints for Travelling in the case of Children. (*Ibid.*, July 30.)

12. KENNEDY.—Observations on Whooping-cough. (*Dub. Jour. of Med. Sci.*, Sept. 1881, p. 247.)

13. FILATOFF.—On the Etiology and Diagnosis of Acute Peritonitis of Children. (*Lancet*, April 30 and May 7.)

14. PARKER.—Remarks on the Curvatures of the Long Bones in Rickets. (*Med. Times and Gaz.*, April 2, 1881.)

15. TREVES, F.—On Strangulated Congenital Hernia. (*Lancet*, Feb. 1881, p. 323.)

16. GREEN, W. E.—On Cerebral Pyrexia in Children who have been exposed in paddling at the sea-side. (*Practitioner*, Feb. 1881, p. 100.)

CLINICAL RECORDS OF CHILDREN'S DISEASES.

Aneurism of Abdominal Aorta in a Fœtus obstructing Birth. Dr. Phänomenoff. (*Archiv. für Gyn.*, Band xvii, p. 133.)

Primary Sarcoma of Vagina and Secondary Affection of the Bladder: aged 2½ years. Dr. Soltmann. (*Jahr. fur Kind.*, March 1881.)

Necrosis of the Cranium: 4½ years: with observations. Dr. Anders. (*Ibid.*)

The Degeneration of Lymphangiomata, illustrated by a case, with remarks. (*Ibid.*)

Infiltration of Urine from Urethral Concretion in a boy 1 year and 9 months old. (*Ibid.*)

Two Cases of Abnormal Formation of the Extremities.

Two Cases of Atropia Poisoning in Children aged 4 years and 8 years, from application to the eyes: treated with Pilocarpin. Dr. Fanzler. (*Ibid.*)

Two Cases of Renal Cancer in Children, aged 6 and 7 years, Secondary Deposits in the Liver, Lungs, and Lymphatic Glands in one case. Prof. Wiederhofer. (*Ibid.*)

Spina Bifida: Girl: Tumour as large as child's head: Removed: Recovery. Mr. Pye, Victoria Hospital for Children. (*Brit. Med. Jour.*, July 9, 1881.)

Hepatotomy for Hydatids of Liver: Girl, aged 7 years: Abdomen opened, cyst aspirated: edges of wound in liver secured to integuments: Treatment by drainage-tubes: non-antiseptic: Recovery. Mr. Lawson Tait. (*Ibid.*, July 16.)

Two Cases of Abdominal Abscess as a result of Enteric Fever: Girls, aged 5 years and 7 years: both 'scrofulous'; both abscesses in umbilical region: one burst externally, the other into bowel: both recovered. Dr. Bruce Low. (*Ibid.*, July 23.)

Rapidly Developed Unilateral Ataxy: Girl, aged 3½ years. Dr. Drummond. (*Ibid.*, July 30.)

Cases of Congenital Morbus Cordis. Dr. Semple, North-Eastern Hospital for Children. (*Med. Press and Cir.*, Aug. 10, 1881.)

Two Cases of Hodgkin's Disease: Boys, aged 8½ years, 2¾ years: Fatal: Details of course and necropsies. Drs. Baxter and Taylor, Evelina Hospital. (*Lancet*, July 9.)

Acute Idiopathic Pericarditis: Boy, aged 11 years: severe pain preceding physical signs: Recovery. Dr. Day, Samaritan Hospital. (*Ibid.*, July 16.)

Three Cases of Acute Suppurative Arthritis in Infants. Mr. Wright, Children's Hospital, Pendlebury. (*Ibid.*, July 23.)

Poisoning by half a grain of Sulphate of Atropia: Girl, aged 2 years: treated with emetics: Recovery. Mr. Fitzmaurice. (*Ibid.*, Sept. 3.)

Ulcerative Enteritis, without Pyrexia: Perforative Peritonitis: Death: Girl, aged 2¾ years. Dr. Grigg, Victoria Hospital. (*Med. Times and Gaz.*, Sept. 24.)

Hysterical Contraction of Left Leg and Foot, without disturbance of sensation or convulsions: Girl, aged 12 years: Recovery. Dr. Finlay, Middlesex Hospital. (*Ibid.*, Sept. 17.)

Retro-Pharyngeal Abscess in Infant 5 weeks old: cause obscure: ulceration into left external carotid artery: Death from hæmorrhage. Dr. Carmichael. (*Edin. Med. Jour.*, July 1881.)

Occlusion of Small Intestine in New-born Child: continuity of Ileum in upper fifth interrupted by ribbon-shaped band of fibrous tissue, ½ in. in length and width: intestines ending in closed ends above and below this obstruction. Dr. Craig. (*Ibid.*, Aug.)

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1. *Scherpf on the Etiology and Symptomatology of Mental Diseases in Children.*—In an exhaustive and valuable article (*Jahrb. für Kinderheilk.*, vol. xvi) Dr. Scherpf treats of the etiology and symptoms of mental disturbances in children. Premising that psychical activity is bound up in the structural nerve-elements, he concludes that mental disease has a somatic cause, and that some organic alteration exists, although it may not always be found; and that moral causes are not to be spoken of in opposition to physical ones, since the former act through the latter. The causes are usually to be divided into predisposing and accidental; and, though not always to be distinguished in every case, an undoubted connection exists between them. Quoting from Emminghaus, he says, 'The longer and stronger these causes have been in action, the more trifling may be the immediate cause determining madness; and when the morbid tendency is very strong, the normal course of life appears to be sufficient to bring about the disturbance.' The following are the causes mentioned by the author, each being treated in considerable detail. 1. *Heredity.*—In connection with this, the following propositions may be affirmed. (*a*) Mental diseases stand in genetic relationship to nervous diseases. Almost all mental, nervous, and cerebral diseases are varieties of a common species, and may give rise one to the other in the course of their descent. (*b*) Diseases may miss generations (atavism). (*c*) The morbid inheritance is not stationary while it lasts, although it may manifest itself similarly in several generations. Generally, heredity acts in proportion to the strength of its factors, and becomes intensified when these factors accumulate, and diminish as the opposite condition is brought about. In most cases of hereditary taint it is not the disease itself, but the predisposition, that is propagated, producing individuals possessed of neuropathic and psychopathic constitutions. 2. *The bringing up.* 3. *Injuries to the head.*—These may lead to immediate mental disturbance, or only after an interval. 4. *Psychoses of long duration*, which are developed in consequence of a bodily disease, are not frequent in childhood, although at that age there is a great liability for the cerebral functions to be disturbed by slight morbid conditions. Such disturbances mainly act by affecting the vascularity of the brain, and it is found that cerebral anæmia is a more frequent cause of mental affections than hyperæmia. The most severe symptoms may so arise, and disappear as quickly as they appeared. Chorea and epilepsy, hysteria and hypochondriasis, are in this group. 5. *The psychoses which accompany acute febrile diseases*, and occur either at the beginning or height of the malady, or during the inanition of the brain in the stages of defervescence or convalescence; the mental disturbance in the former case being maniacal in character, and in the latter milder and subdued in form. 6. *Constitutional and chronic diseases*, as tuberculosis, lead to mental disturbance; and also entozoa. 7. *Influence of sexual development.* 8. *Imitative instinct*, including religious mania. 9. *Toxic psychoses*, as from opium, belladonna, santonin, chloral, etc. The portion of the article devoted to symptomatology does not admit of condensation, and would well repay perusal. An extensive list of references is appended.

3. *Demme on Pilocarpin in Scarlet Fever and Diphtheria.*—Professor Demme, in a long contribution (*Jahrb. für Kinder.*, vol. xvi), continues the record of his observations on pilocarpin in scarlet fever and diphtheria, commenced in 1877. The conclusions at which he arrives are as follows. 1. The variable results in the observed action of muriate of pilocarpin is due to the presence with it of a second alkaloid, jaborin, resembling, according to Harnack and Meyer, atropia in its physiological action, as the pilocarpin is more like nicotin. 2. When a rapid effect is wanted, it is best administered hypodermically in doses of 1-60th to 1-24th of a grain under a year old, and 1-12th of a grain up to ten years. When given internally, the dose should be two or three times larger, with gum acacia to prevent diarrhœa. These quantities may be increased and repeated if a continuous effect be desired. 3. To prevent the vomiting and collapse which occasionally follow the subcutaneous injection, cognac, wine, strong tea or coffee, or ether, hypodermically, may be previously given. Similar stimulants are recommended when the drug is given by the mouth. The cardiac depression, which may amount to general collapse, with temporary loss of consciousness, and Cheyne-Stokes' respiration, which are liable to follow too large or too frequent doses, require stimulants. 4. Different individuals, and the same individual at different times, vary in their susceptibility to the action of the drug; and a vicarious relation between diaphoretic and sialagogue action is occasionally observed. 5. As a part of the general activity of the secretions, a marked expectorant effect, and in some cases an abundant flow from the nasal, laryngeal, and tracheal mucous membranes, occurs. Another less constant effect at the height or end of the diaphoresis, is increased urinary secretion, due to the increased blood-pressure, the rapidity of flow in the glomeruli, and, perhaps, also to an effect of the drug on the renal vaso-motor nerves, or even on the floor of the fourth ventricle. 6. The superficial erythema, perceptible at the beginning of the sweating, is due to irritation of the peripheral vessels. 7. In cases of scarlet fever, where the rash is delayed or incomplete, and where, at the same time, there are severe cerebral symptoms, an energetic diaphoresis by injection of pilocarpin most rapidly removes

the scarlatinal poison from the blood, and brings out the eruption, thus relieving the cerebral symptoms. 8. Pilocarpin cannot prevent scarlatinal nephritis, but it is the most effectual remedy against dropsy; and in cases treated by it, the kidney-affection appears to run a more favourable course. 9. Nor can it prevent an attack of uræmia, occurring from extensive glomerular and interstitial nephritis; but in less severe cases its diaphoretic and diuretic action can avert uræmic attacks threatening life, and can relieve them more quickly than any other remedy hitherto employed. 10. Owing to its expectorant action, it facilitates recovery from catarrhal laryngitis, from infectious and non-infectious croup, from catarrhal pneumonia; and by the relief of symptoms of laryngo- and tracheo-stenosis which immediately threaten life. Similarly, a quicker loosening of the membrane and fibrinous infiltrations of true and also of scarlatinal diphtheria follows the administration of pilocarpin, though it does not appear to exert any action upon the specific contagium of the disease.

5. *Förster on the Management of Fever in Children.*—The antipyretic treatment of fever in children by cold water, quinine, and salicylic acid, is the subject of some remarks by Dr. Förster (*b*.) The indication for their employment may be stated to be when danger supervenes from either the height or the duration of the pyrexia. Accurate observations are still wanting on the effect of cold baths, but their therapeutic value is greater than in adults, and their action more intense, since the body-surface is greater in proportion to the body-volume in children. There appears to be considerable difference between rectal and axillary temperatures after cold baths, and a marked fluctuation for some time afterwards. In cases where baths are not applicable, cold packing, sponging, or spraying may be employed; but the effect is not so marked. Quinine and salicylic acid have a more permanent effect than cold water, and should be given to children in doses much larger relatively to their body-weight than is the case in adults. Their use is frequently followed by vomiting; and in those diseases attended by failure of the heart's action, as diphtheria, quinine is to be preferred.

7. *Filatoff on Benzoate of Soda in Diphtheria.*—The result of the observations of Dr. Filatoff, in Moscow (*Arch. für Kinder.*, vol. ii), on the treatment of diphtheria with benzoate of soda, goes to show that this drug is far from being a specific, as asserted by some, and exerts no action on the blood-poison, nor on the removal of the membrane, nor, as an antipyretic, superior to any other agent previously suggested.

8. *Seiler on Ascites in Childhood.*—Dr. Seiler (*Berlin Klin. Woch.*, June 27) divides cases of ascites in children into two primary classes: 1. Those dependent upon some affection of the peritoneum; 2. Those resulting from obstruction in the portal system, exclusive of such varieties as so-called chylous ascites, or fatty degeneration of the peritoneum, or the ascites which forms part of a general dropsy. In the first group are included (*a*) tubercular peritonitis, the exudation in which is always serous, and never hæmorrhagic as is often asserted; (*b*) primary carcinoma of the peritoneum, which often runs a painless chronic course, with a constant sanguineous exudation; (*c*) a primary peritoneal exudation, the result of inflammation similar to pleuritic effusion, is of very doubtful occurrence. In the second group are to be enumerated (*a*) medullary sarcoma of the liver pressing on the portal vein; (*b*) syphilitic gummata, or cicatricial contraction of the liver; (*c*) cirrhosis of the liver. This is the most important. The precise cause of this condition in all cases is obscure, but in the majority, where alcohol is excluded, a diffuse syphilitic hepatitis may be looked upon as producing it. Such cases are curable by mercury and iodide of potassium.

9. *Strange on Chorea.*—The results of the treatment of 100 cases of chorea in the Worcester Infirmary by Dr. Strange (*Brit. Med. Jour.*, July 16 and 30), lead him to regard the disease, along with some of its congeners, as 'a pure inorganic neurosis, the term implying that it has no anatomical or true pathological basis, *post mortem* examinations not having given to it any definite morbid anatomy; and to be looked upon, therefore, as the outcome of a merely functional disturbance, with a substratum of that undefined and, perhaps, for ever undefinable alteration in nutrition of the nervous centres, which we must suppose underlies all the effects of their functions'. The author regards the disease as essentially one of debility or deficiency of nerve-power, and considers that the greater frequency of its occurrence in ill-nourished subjects, as well as the excessive motility or want of power to restrain, as well as duly to coördinate muscular movement, are proofs of this proposition. Fright operated as the exciting cause in at least two-thirds of the cases. Hemichorea was of rare occurrence; and in a few cases the affection was limited to several muscles or even the diaphragm only, producing in this case every two or three minutes, except during sleep, a sharp jerky hiccough. The writer considers that everything points to defective nutrition of the brain, and, perhaps, of the spinal cord also. Agreeing with Dr. Sturges in the value of the moral treatment of this malady, Dr. Strange considers that it alone is not sufficient, and that tonics, friction of the limbs, and gymnastics, are equally necessary. One of the most successful tonics the author has found to be the daily administration of 3 to 6 ounces of port wine.

12. *Kennedy on Whooping-Cough.*—Dr. Kennedy, in the course of some remarks on purtussis at the Dublin Obstetrical Society (*Dublin Jour. of Med. Science*, Sept.), expressed an opinion that the disease is partly neurotic and partly of a specific inflammatory character; and he considers that during the existence of the disease some poison circulates in the system. In justification of this view, he refers to the paroxysmal and convulsive cough which often occurs in the gouty diathesis, and in that form of influenza know as 'la grippe', as well as in varicose irritation, or cases of worms. The author is further of opinion that there is some temporary enlargement of the lymphatic glands, especially those of the thorax. Referring to the frequent difficulty in diagnosis before the whoop appears, he refers to the following points as helping to come to a conclusion; the persistence of the cough and its resistance to treatment; the liability of the child to be suddenly awakened by the cough from a quiet sleep; the congested and slightly swollen fauces. Dr. Kennedy is quite of opinion that the disease is amenable to treatment, and should not be regarded as necessarily to run its course. He advises a strictly fluid diet, chiefly milk; and, looking to the fact that the cough is worse at night, he directs the medicine to be given in the afternoon and on into the night, a dose after each paroxysm. The inhalation of one or two whiffs of chloroform he has found of marked service in lessening the violence of the fits. A mixture containing bicarbonate of potash and tincture of

belladonna, an old remedy, is often efficacious in diminishing the intensity and frequency of the attacks; for which also 2 to 4 grains of extract of conium may be given. Chloral, however, gives the best and most constant results, and may be given in doses of half a grain to an infant a month old. When the bronchial secretion is profuse, expectorants, of which ipecacuanha is best, are indicated; and rubefacients, especially if rubbed on the stomach, the often useful.

13. *Filatoff on the Etiology and Diagnosis of Acute Peritonitis of Children.*—The diagnosis of acute peritonitis offers no difficulty, so characteristic are the symptoms; but the explanation of a cause is not always so easy, and in many cases is quite unknown, or included in the vague term rheumatic. Dr. Filatoff, after pointing this out, proceeds to recount a case in which all the marked symptoms of the disease were present, and which he considered was due primarily to a straining of the abdominal muscles by excessive gymnastic exercise, followed by improper diet. He refers to another case, in which the symptoms of acute peritonitis were closely simulated by an affection of the recti abdominis, also brought on by excessive gymnastics.

14. *Parker on the Curvatures of the Long Bones in Rickets.*—In the course of some remarks on the curvatures in the long bones in rickets, Mr. Parker takes exception to the usually received explanation of their cause. He says that after diligent searching he has never seen 'soft and yielding' long bones in rickets, either *post mortem* or in the course of osteotomies, and he quotes Virchow in denying rickets to be a malacia. Mr. Parker states that the majority of curves occur between the second and third years; and he is inclined to regard them as exaggerations of the natural curves, and further considers their great similarity to contra-indicate softening as a cause, which should rather lead to indiscriminate flexures. The exceptional recorded cases of undoubted rickets, where the curvatures commenced in advanced childhood, and even during adolescence, when softening of bones does not seem at all possible, as well as the spontaneous disappearance of the curves without keeping children off their feet, and without artificial support, as well as the very slow recovery often seen with mechanical restraint and perfect rest, are all adduced as arguments by the author against the current explanation. Without offering any reason, Mr. Parker believes that the long bones may assume various and considerable curves without undergoing infraction, or without previously becoming soft. The relaxed and flabby condition of the muscular system generally to be found in such cases, exclude muscular action as a cause for the curvatures of the long bones. [It should not be difficult to determine whether rachitic bones be soft or not. There is an acknowledged deficiency in hard mineral constituents, and an excess in the soft spongy ossifying material, even to the extent that 'thick bones may be cut with a knife or pair of scissors' (Aitken). The deformities of the spine and chest, as well as the very frequent flexures of the long bones, in directions other than those of the normal curves, and the liability to 'green stick fracture' in rickets, can scarcely be explained on any 'hypertrophic view' unless the hypertrophied tissue be unduly soft.—*Rep.*] W. H. Allchin, M.B.

15. *Treves on Strangulated Congenital Hernia.*—In the *Lancet*, Feb. 1881, p. 323, Mr. Frederick Treves gives the notes of a case of umbilical hernia in a child a few hours old. The cord at its point of connexion with the abdomen presented an oval and uniform swelling, about the size of a bantam's egg. The swelling was in the cord itself, and that structure, at its union with the abdominal parietes, was but little larger than normal. Nothing had passed from the bowels since birth. No operative interference was allowed until the next day, when the tumour was opened and the bowels found firmly strangulated, the seat of constriction being at the neck of the sac. After some difficulty, the bowel was freed, and twelve hours subsequently a copious motion passed, the child making a perfect recovery. A *résumé* of what is known and has been done in similar cases closes this instructive paper.

16. *Green on Cerebral Pyrexia in Children who have been Exposed in Paddling at the Seaside.*—In the *Practitioner*, Feb. 1881, p. 100, Mr. W. E. Green records the results of his observations upon children who suffered from sun-fever, after exposure to the hot sun of the past summer, whilst paddling in the sea. The affection is nearly allied to sunstroke. Cases in Mr. Green's practice have been diagnosed as acute tuberculosis and typhus and typhoid fevers, but presented the following distinctive characters. 1. The temperature rises at once to its highest point, and there remains, or else falls to 102.4, when it continues steady until its final fall; and, unlike typhoid, if there be any variation, it falls a little towards night, and returns to its original standard in the morning. 2. The pulse may be rather rapid for the first day or two, but soon falls to a full bounding pulse of from seventy-two to eighty-four; the pulse in typhoid generally rising *pari passu* with the temperature. 3. The tongue is rarely dry, the diarrhœa is only occasional, there is no tympanites, and as a rule very little thirst, the patient liking milk, but showing great distaste to other food.

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NEUROLOGY.

RECENT PAPERS.

1. Archer, R. S.—Case of Spinal Irritation Complicated by Cataleptic Manifestations. (*Dub. Journ. of Med. Science*, April.)

2. Mercer, A. S.—Myxœdema. (*New York Med. Rec.*, April 16.)

3. Seguin.—Postparalytic Chorea. (*Trans. American Neurol. Assoc.*, vol. ii.)

4. Seguin, E. C.—Localised Cerebral Lesions. (*Ibid.*)

5. Garnier.—Vesication in Epistaxis. (*Jour. de Méd. et de Chir.*, April 1881.)

6. Seguin.—Early Diagnosis of Some Organic Diseases of the Nervous System. (*New York Med. Record*, 1881.)

7. Westphal.—Affections of the Joints in Locomotor Ataxy. (*Berlin. Klin. Woch.*, July 18, 1881.)

1. *Archer on a Case of Spinal Irritation, complicated by Cataleptic Manifestations.*—Dr. Archer (*Dublin Journal of Medical Science*, April 1881) gives the following as the most important symptoms of spinal irritation: pain and tenderness along the spine, especially in the cervical, interscapular, and lumbar regions; hyperæsthesia of the skin over these parts; neuralgic pains in various parts; paræsthesia and anæsthesia; readily induced fatigue, and inability to walk for any distance without pain; ab-

sence of true paralysis; spasmodic phenomena; vaso-motor disturbances, such as pallor and cyanosis of the extremities; gastric derangement; palpitation; disorders of respiration and spasmodic cough; spasm of the bladder and the passage of an increased quantity of pale clear urine; sleeplessness, giddiness, noises in the head, disturbances of vision, muscle, etc. The proximate exciting causes are stated by Erb to be alcoholic excesses, opium-eating, traumatism, cold, and other influences exciting or depressing the nervous system. Opinions vary as to the condition of the spinal cord. Some believe that there is hyperæmia, others anæmia, and others still (including Erb) that the disorder is functional. The case related by Dr. Archer presented several of the symptoms above-mentioned; but it was complicated with cataleptic symptoms, and some degree of mental disturbance. The disease was ascribed to a severe fall seventeen days previously. Dr. Archer, whilst allowing that there was an hysterical element in the case, nevertheless believes that this was not the only influence at work. According to Dr. Archer, the medulla oblongata is also liable to 'molecular temporary disturbance'. He narrates the case of a lady who was seized with transitory inco-ordinate articulation after a sudden mental shock.

2. *Mercer on Myxœdema.*— In this paper (*New York Medical Record*, April 16, 1881), which was read before the Syracuse Medical Association, Dr. A. C. Mercer gives an excellent *résumé* of this affection. When considering the causes of myxœdema, he remarks that the mucoid change, occasionally found in the cartilages of old people, suggests that this disease may perhaps be due to exhausting influences; and, in support of this view, he quotes a case of Dr. Semon's. Dr. Mercer inclines to the opinion that the disease has a trophic neurotic origin.

3. *Seguin on Postparalytic Chorea.*—Dr. Seguin (*Trans. of the Amer. Neurol. Assoc.*, vol. ii) describes two cases of the interesting affection which Charcot has termed 'posthemiplegic' chorea. The first case was that of a male, aged 18, who was suddenly attacked by weakness of the left arm, followed in the course of a few days by numbness. At the onset cerebral symptoms were absent, and the leg was quite unaffected. Later, convulsive movements of the arm, leg, and face on the left side, made their appearance. The sight became impaired; temporary diplopia, with double vision, temporal headache, and nausea succeeded; but there were no rectal or vesical symptoms, and no dysphagia. On careful examination, he was found to be suffering from left hemiplegia, accompanied by peculiar spasmodic movements, which are described as choreiform. The parts affected were the left arm, shoulder, and leg, the muscles of the trunk and neck being uninvolved. The spasms, which presented a marked ataxiform element were absent during sleep. Sensibility was slightly impaired in the fingers and hands. There was no paralysis nor twitching of the face, no impairment of the visual fields; the tongue, however, pointed a little to the left, the left pupil was larger than the right, and the optic discs were congested and blurred. There was no evident paralysis of the muscles of the eyeballs. At a later period, marked hebetude came on; paralysis of the right third nerve, with left facial palsy and anæsthesia in the course of the left supra-orbital, were noticed. Before death, there were frequent syncopal attacks without spasm or unconsciousness. No necropsy was made. Dr. Seguin believes that the lesion was hæmorrhage, with subsequent inflammation around the clot, though he allows that a tumour may have existed. The lesion was probably situated above the motor tract of the right crus cerebri, which must have been acted upon by pressure. The second case was that of a male, aged 26, who was suddenly attacked with right hemiplegia. The day following, there was aphasia, and he 'could only see with the inner half of the right eye'. The paralysis improved, but irregular movements of the right arm gradually made their appearance, and there was numbness, especially on the right half of the face. Subsequently, the patient had two epileptiform attacks attended by loss of consciousness. On examination he was found to have a kind of 'aphasic stammering' and slight weakness of the right hand. The movements were of two kinds. When the hand was at rest, it was affected with rhythmical tremors, like those of paralysis agitans. When a purposive action was attempted, the movement was partly ataxiform and partly, though to a less extent, of a choreic type. The right leg was unaffected; there was no facial paralysis, but the tongue deviated slightly to the right. There was right hemianæsthesia to a certain extent. The right temporal and left nasal halves of the visual fields were obscured. There was no distinct history of syphilis; still the treatment was directed, though unsuccessfully, against that disease. The diagnosis was 'slight cerebral hæmorrhage just outside the left optic thalamus.' Dr. Seguin calls attention to the co-existence in these cases of hemiplegia, hemianæsthesia, and choreiform movements. He believes that the hemiopia in the second case is an argument against Charcot's assertion, that lesion of the hemisphere is incapable of producing this defect of vision. Dr. Seguin remarks that 'there is no probability that there was in this case a second lesion affecting one of the optic tracts.' [If we are not mistaken, Dr. Seguin has misunderstood M. Charcot's statement. The latter maintains that hemiopia is due either directly to lesion of the optic tract or, indirectly, to pressure exerted on the tract by a neighbouring lesion. There is no reason why hæmorrhage, for example, in one hemisphere should not exert pressure on the optic tract. In the absence of a necropsy, this case cannot be brought forward as disproving Charcot's proposition, although Dr. Hughlings Jackson, and others, have adduced evidence of a very conclusive nature against the statement that hemiopia is invariably caused, directly or indirectly, by involvement of the optic tract.—*Rep.*]

4. *Seguin on Localised Cerebral Lesions.*— The cases described by Dr. Seguin (*Trans. of the Amer. Neurol. Assoc.*, vol. ii, 1877) are divided into three classes: (1) cases in which localised lesions gave rise to aphasia; (2) those causing paralysis; (3) those producing spasm. In the first category four cases are included, all tending to support Broca's proposition as to the seat of the speech-centre. The first case was one of right hemiplegia with aphasia. After death, extensive softening was found affecting the cortex of the left hemisphere, especially in the region of the parietal lobe. There was superficial degeneration of the cortex of the third frontal convolution. Although the psycho-motor centres were destroyed, the patient regained considerable voluntary power over her paralysed extremities. Dr. Seguin believes that other parts of the hemisphere had acquired controlling power over the limbs. The second case, also one of right hemiplegia and aphasia, is interesting from the fact that there was embolism of the left middle cerebral artery, with softening limited to the white matter corresponding to the

third frontal convolution. The ascending frontal and parietal convolutions were apparently intact. Unfortunately, no microscopical examination was made. Dr. Seguin remarks that these parts may have been spared from gross softening, by an usually free anastomosis between the terminal branches of the obstructed Sylvian artery. In the third case, there was chronic meningitis involving the speech-centre and the lower extremities of the ascending convolutions, but, in addition, there was extensive central softening. The symptoms were aphasia and right hemiplegia, with epilepsy and distinct insanity. This and the fourth case, one of tubercular meningitis and constitutional syphilis, although tending to support Broca's hypothesis, are so complicated that their value is much impaired. In the second part, Dr. Seguin narrates a case of paralysis dependent on a limited cerebral lesion. The patient, a woman aged 54, became suddenly paralysed on the right side. The face was unaffected, the speech preserved, and there was no unconsciousness. At the necropsy, there was an appearance like ulceration of the ascending frontal convolution and softening of the subjacent white matter. In addition, there was found to be exudation between the dura mater and bones, from the third to the fifth cervical vertebræ. In the third part, two cases of localised convulsions, dependent on limited cerebral lesions, are described. In the first case there was a history of a fall, followed by left hemiplegia. Three years afterwards, ordinary epileptic convulsions came on. Subsequently, the attacks were localised to the left side of the face and neck and left arm. The spasms began in the facial muscles, and in those of the thumb and index finger. There was no loss of consciousness. The left arm was quite paralysed, and the left side of the face and left leg paretic. There was also left tactile anæsthesia. Before death, the hemiplegia became more pronounced, the extremities rigid, and the convulsions attended by unconsciousness. There was no sign of optic neuritis at any time. The necropsy showed inflammatory thickening of the right frontal bone, a large tumour (alveolar sarcoma) in the right centrum ovale, with consequent pressure on the white matter and central ganglia. There was also pachymeningitis affecting the convolutions on the right of the longitudinal fissure, with much thickening and roughness of the corresponding portion of the calvarium. The second case was that of a boy, who had suffered for many years from an empyema. He was suddenly attacked by clonic spasm affecting the middle finger of the left hand, extending to the forearm and left side of the face. The attack, which lasted about a minute, was not attended by loss of consciousness, anæsthesia, or subsequent paralysis. The patient, however, had much headache, vomiting, and pyrexia. Before death, albuminuria, irregularity of pulse, and general convulsions were noticed. At the necropsy, there was found to be basal meningitis without tubercles. On the left side an abscess involved the lower part of the second frontal convolution, and the third frontal just in front of the speech-centre. No symptoms referable to this lesion were observed during life; and hence Dr. Seguin concludes that in some human brains these parts contain no motor cell-groups. On the right side a small abscess, of the size of a pea, was found in the white substance beneath the cortex of the anterior part of the second parietal convolution, just above the upper extremity of the fissure of Sylvius. This lesion, which probably gave rise to the spasm of the left side of the face and left hand and forearm, was situated just behind Ferrier's centres for movements of the hand and wrist.

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5. *Garnier on Vesication in Epistaxis.*—Dr. Garnier, at a meeting of the French Association of Science (*Journ. de Méd. et de Chir.*, April 1881), reported a case of obstinate epistaxis in which ergotine, etc., had been tried in vain, but which promptly yielded to the application of a blister over the liver. The patient was an alcoholist, and his liver seemed slightly cirrhotic. The blister, it is alleged, acted on the nervous reflex principle.

6. *Seguin on Localisation of Diseases of the Spinal Cord.*—Dr. Seguin of New York (*Annals of the Brooklyn Anat. and Surg. Soc.*, vol. ii, No. 12) divides the spinal cord roughly into two unequal regions, viz., the æsthesodic system, which comprises the posterior columns and cornua, and serves for the transmission of centripetal or sensory impulses; and the kinesodic system, including the antero-lateral columns and anterior cornua, serving for the transmission of centrifugal or motor impulses. Diseases of the cord may be divided into systematic and focal affections, the former involving either the æsthesodic or the kinesodic system, and the latter implicating the lumbar enlargement, the lower and upper dorsal region, the cervical enlargement, upper cervical region, and cauda equina. Of these diseases, Dr. Seguin, in the present communication, only considers those which are systematic. The only disease of the æsthesodic system is posterior sclerosis, tabes or locomotor ataxy, affecting the posterior root-zones, or columns of Burdach. He gives a good description of the lightning pains peculiar to this disease, and owing to irritation of the sensory nerve-fibres by the advancing sclerosis; while the numbness and anæsthesia of the later stage are caused by actual destruction, or great compression, of the sensory fibres. Retardation of sensation, so that 10 to 120 seconds elapse between the impression and the realisation of it, is also caused by destruction of the myeline, and pressure on the axis-cylinders, by the sclerosed interfibrillary tissue. The other symptoms of tabes are to all appearance motor, but depend really on interference of the disease with the sensory paths, being diminished reflexes, pupillary, cutaneous, tendinous, and visceral; the latter affecting chiefly the bladder, rectum, and sexual organs. For the explanation of the symptom of ataxy he gives three theories, viz., 1. That interference with sensory intraspinal tracts diminishes muscular tonus, and thus leads to inharmonious movements; 2. That anæsthesia of the muscles leads to loss of muscular sense; and 3. That Lockhart Clarke's arciform or longitudinal commissural fibres are sclerosed, and, as they are believed to unite, for the purpose of harmonious action, the spinal centres for the various groups of muscles, therefore ill-combined, asynergic muscular movements must be produced. Amongst the diseases of the kinesodic system Dr. Seguin mentions, first, the degeneration of ganglion-cells in the anterior horns, corresponding, clinically, to muscular atrophy; the chief peculiarities of it being its gradual invasion, affection of symmetrical and homologous parts, and fibrillary twitches of the affected muscles. This latter symptom, however, is not pathognomonic, as was formerly believed; for the same twitches may be seen in neurasthenia, lead-palsy, and some other forms of paralysis. The second disease is anterior myelitis, which is characterised by rapidly supervening paralysis, muscular atrophy, altered electrical reac-

tions of nerves and muscles (degeneration-reaction, Erb; wasting-test, Althaus), non-affection of the bladder and rectum, or the respiratory muscles, abolition of tendon-reflexes, slight development of sensory symptoms, such as numbness, paræsthesia, or neural pains, and fever. In the third place, lateral sclerosis, spasmodic tabes (Charcot), spastic spinal paralysis (Erb), tetanoid paraplegia (Seguin), is considered. The author does not commit himself to any decided view regarding the pathological anatomy of this disease. The principal symptoms are slowly increasing paresis in the legs, with tendency to contracture and increase in all reflexes, precipitate micturition and defæcation, and absence of sensory symptoms. After a few remarks on infantile tetanoid paralysis, amyotrophic lateral sclerosis is recognised as a combination of diseases of the anterior cornua and lateral column; and, lastly, descending degeneration of spinal and cerebral origin is treated. The spinal form occurs when the physiological continuity of the cord is interrupted, through injury, pressure from a tumour or a displaced vertebra, or a focus of transverse myelitis, the changes differing completely above and below the seat of the lesion. Above, it is limited to Goll's columns, while below it affects the crossed and direct pyramidal columns. The cerebral form occurs in focal disease above the decussation of the anterior pyramids, the nature of the lesions being immaterial, and the symptoms consisting of increased reflexes and contracture in the paralysed parts. Contrary to the generally received opinion, Dr. Seguin repeats his hypothesis of the contracture being due to the withdrawal of cerebral influence by the primary lesion, and the consequent preponderance of automatic spinal action. He does not, however, explain why the symptoms of contracture and increased tendon-reflexes only appear about six weeks after the lesion, *i.e.*, after sclerosing myelitis has begun in the crossed pyramidal tracts. If Dr. Seguin's theory were correct, there ought to be increased tendon-reflex and ankle-clonus immediately after the paralytic seizure, which is well known not to be the case; and his theory has for this reason to be rejected.

7. *Westphal on Affections of the Joints in Locomotor Ataxy* (*Tabes Spinalis*).—Professor Westphal (*Berl. Klin. Woch.*, July 18, 1881) says that the affection of the joints, to which Charcot was the first to draw attention, sometimes comes on quite suddenly, so that the patient, on awaking in the morning, notices a swelling; and, on examination, it is found that there is effusion in the neighbourhood of the joint, and into the joint itself. There is neither redness of the skin nor pain on active or passive movement, nor increase of temperature, and the general health is not in any way affected. Soon afterwards, the swelling is noticed to spread over greater areas of the suffering limbs, and does not resemble œdema, but is firm to the touch, so that pressure does not cause any pitting. Occasionally, the superficial veins of the extremities are found to be distended. The swelling of the limbs and the serous effusion into the joints go on increasing, and the latter often attains an enormous size. Sometimes, on moving the joint, a kind of crepitus or crackling is perceived; it appears deformed; and hard, round, and partially movable foreign bodies may be felt in the articulation. This swelling tends to remain stationary after having attained a certain extent, for weeks and months, and then slowly diminishes again; the deformity, however, and the abnormal mobility (dislocation and subdislocation) become permanent. The epiphyses appear to have been destroyed, or, in their place, there are thick and irregular masses of bone, or smaller and rounded osseous patches, at the sides of the joint, which may be movable, and the movements of which are accompanied by a crunching noise. French authors distinguish a benign and a malignant form, the latter being marked by rapidly developed deformity, while in the former there is only swelling without a perceptible change in the joint itself after the liquid effusion has been absorbed; but Westphal thinks that these two forms cannot be strictly separated, since they are apt to merge into one another, for even benign swellings tend to return from time to time, and lead sooner or later to structural changes in the articulation. It is almost invariably the larger joints which are the seat of the affection, more especially those of the foot, the knee, shoulder, and elbow; while those of the hand and fingers are very rarely affected. Arthropathy is not confined to any one of the three stages of tabes, and has no particular predilection for the later periods of the disease. Indeed, Westphal describes a case which occurred in the beginning of the malady, and long before the symptoms of ataxy had become manifest. In that case, there had been temporary double vision seven years previously to the appearance of the arthropathy, and four years afterwards the first symptoms of joint-disease, with impotency and incontinence of the urine, became developed; and only three years later the other characteristic symptoms of tabes set in. Occasionally there may be redness of the skin, as Westphal saw in the case of a Russian captain, in whom most of the joints of the upper extremities, and even the smaller ones, were affected. He does not attach much importance to the statement of Buzzard that 'gastric crises' are frequently combined with arthropathies, for gastric crises are very frequent, while arthropathies are rare; and, in Westphal's cases of arthropathy, gastric crises happened to be absent. There is, in certain cases of tabes, a tendency to spontaneous fractures of the bones, which would appear to be connected with the arthropathy. In one of Westphal's cases, the right femur was fractured in bed, the patient having raised the leg quickly, in atactic fashion. In another case, there was at first such a firm and extensive swelling of the right hip and thigh, that nothing definite could be ascertained about the nature of the changes which had taken place; but when the swelling diminished there appeared to be dislocation of the hip-joint, absence of the head of the femur, and a hard irregular kind of tumour which proceeded from the upper third of the femur, and gave the impression of an osteoma; after a time, however, it began to shrink, and felt like irregular callus. Westphal explains this by primary affection of the hip-joint, which predisposed the upper portion of the femur to spontaneous fracture; and this latter was facilitated partly by the atactic movements of the legs, and partly by extremely severe tonic and clonic spasms of the legs, from which the patient suffered. The nature of the changes is in general as follows: thickening of the capsule, more or less extensive destruction of the synovial membrane or proliferation of the same; destruction of the cartilages, with sclerosis of bone and formation of stalactites; more or less clear, yellowish liquid in the joint, rarely pus; and destruction of the head of the bone, sometimes extending even further, and leading to dislocation, subdislocation, and, occasionally, to the formation of a new joint. French

authors are agreed that there is a causal connection between arthropathy and the sclerosis of the posterior columns; but Westphal is not sure of this, more especially as Charcot's explanation of it by atrophy of the ganglion-cells in the anterior horns can no longer be received, since, in some such cases, the anterior horns have been found perfectly healthy. Another question is, whether this is a form of joint-disease peculiar to tabes, and which does not occur otherwise. Charcot is of this opinion, and has endeavoured to separate it absolutely from arthritis deformans; but Westphal thinks that the question is still an open one. Supposing, however, that the affection were peculiar to tabes, it has not yet been shown in what way and under what special conditions the central disease conduces to a joint-affection. Experimental physiology does not help us in this matter. It would be easily intelligible if injury could be shown to be the exciting cause of it; and this is Volkmann's opinion, who accuses the atactic movements of the patients, as causing injury to the ligaments and capsules by distension, and thus leading to arthritis. But this explanation is refuted by the circumstance that arthropathy often occurs previously to the development of the symptoms of ataxy; and the whole subject appears to be still enveloped in great obscurity.

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DISEASES OF THE THROAT.

RECENT PAPERS.

1. LUX.—Perichondritis and Chondritis of the Larynx. (*Rec. des Mém. de Méd. de Chir. et de Phar. Militaire*, July and August 1881; *Gaz. Méd. de Paris*, Sept 3, 1881.)

2. GOUGUENHEIM.—Tracheo-Laryngeal Adenopathy. (*Gaz. Hebd. de Méd. et Chir.*, Sept. 9, 1881.)

3. CHAUFFARD.—Phlegmonous Laryngitis: Œdema of the Glottis. (*Ann. des Mal. de l'Oreille, du Larynx, etc.*, July 1881.)

4. SCHWARTZE.—Œdema of the Glottis following Suppuration of the Cervical Glands. (*Société Clinique*, Feb. 10, 1881; *Ann. des Mal. du Larynx*, July 1881.)

5. KRISHABER.—The Removal of the Tonsils by the Actual Cautery. (*Ann. des Mal. de l'Oreille, du Larynx, etc.*, July 1881.)

6. WHITE.—A New Solvent for Diphtheria. (*Lancet*, Oct. 22, 1881.)

7. HARTMANN.—Epistaxis. (*Zeits. für Ohren.*, Theil x.)

8. MARTIN.—True Ozæna. (*Ann. des Mal. du Larynx, etc.*, July 1881.)

9. SCHEIFFER.—Ozæna. (*Monats. für Ohren.*, No. 4, 1881.)

10. SMITH.—Indications for the Treatment of Naso-Pharyngeal Catarrh. (*New York Med. Rec.*, Aug. 1881.)

11. BRESGEN.—Chronic Catarrh of the Nasal Fossæ and Pharynx. (*Ann. des Mal. du Larynx, etc.*, July 1881.)

12. TOAL.—Lesions of the Larynx in Tuberculosis. *Archiv. Gén. de Méd.*, May and June 1881.)

13. TAUBER.—Removal of a Bullet from the Pyriform Sinus. (*Ibid.*)

14. MICHAEL.—Chronic Laryngeal Affections in Children the Result of Acute Infectious Disease. (*Deut. Archiv für Klin. Med.*, Band xxvii, Heft 6.)

15. LANGENBECK.—Syphilitic Stenosis of the Larynx. *Deut. Archiv für Klin. Med.*, Band xxvii, p. 322.)

16. DALY.—Nasal Polypi. (*Arch. of Laryng.*, April 1, 1881.)

17. GERSTER.—Wound of the Hard Palate by Fracture of the Lower Jaw: Uranoplasty. (*New York Med. R.*

1. *Lux on Perichondritis and Chondritis of the Larynx.*—Dr. Lux (*Rec. des Mém. de Méd. de Chir. et de Phar. Militaires*, July and August 1881; *Gaz. Méd. de Paris*, Sept. 3, 1881) records a case of the above in a man with a doubtful syphilitic history. For some months, he had suffered from angina. On entering the hospital he was pale and anæmic, the tonsils were red and swollen, and there was some superficial ulceration on the left anterior pillar of the fauces. Dull pain was elicited on pressing the larynx. There was no fever. Eight days afterwards, deep ulceration was perceived on the left anterior pillar of the fauces, with greyish base and red edges. There was no pain on moving the larynx; but, on grasping this part with the fingers, Dr. Lux thought he could detect some slight crepitation. The ulceration spread downwards by the side of the larynx. Respiration became difficult, but unattended with cough, and death occurred suddenly in a fit of suffocation. At the necropsy, the cricoid cartilage was found denuded. The middle and posterior parts of it had disappeared, leaving the cartilage of crescentic form. The left portion, necrosed and detached, was bathed in pus. The crico-arytenoid muscles were thickened, and of a deep red colour.

2. *Gouguenheim on Tracheo-Laryngeal Adenopathy.*—The author sums up his paper on the above subject (*Gaz. Hebd. de Méd. et Chir.*, Sept. 9, 1881) with the following conclusions. The space between the larynx, trachea, and œsophagus, is the seat of very small lymphatic glands in the neighbourhood of the recurrent nerves. These glands are not always present, or they are so small that they can only with difficulty be discovered, and for this reason are not described in anatomical treatises. Hypertrophy of these glands constitute what he calls tracheo-laryngeal adenopathy. The compression of the recurrent nerves by these hypertrophied glands produces signs hitherto wrongly ascribed to an enlargement of the tracheo-bronchial glands. The symptoms are of two kinds: paresis, and contraction of the vocal cords. Paresis is rather common in the course of tuberculosis, of secondary syphilis, and perhaps of cancer as well. Contraction is extremely rare. Paresis of the vocal cords is capable of improvement by the induction-current. Contraction is very serious; it may provoke dangerous respiratory troubles and necessitate tracheotomy.

3. *Krishaber on the Removal of the Tonsils by the Actual Cautery.*—Dr. Krishaber (*Ann. des Maladies de l'Oreille, du Larynx, etc.*, July 1881), has for two years used the actual cautery in the treatment of hypertrophied tonsils. The results, he says, are as satisfactory as those that follow the excision of the tonsils with the tonsillotome or bistoury, while the risk of serious hæmorrhage that may occur when these latter methods are used is avoided. The process is as follows. The patient is placed as for laryngoscopic examination, with the mouth open, the tongue firmly held down by a spatula, and the back of the throat well illumined. Dr. Krishaber generally uses Paquelin's thermo-cautery, with tapering point, and brought to a red heat. When he wants to alter the nutrition of the gland only, he prefers using the galvano-battery of Trouvé. The point of the instrument is plunged as deeply as possible into the tonsil, then five or six fresh punctures are made above and below the first, in a vertical line, and 6 or 8 millimètres from the free edge. Between the operations, which generally have to be repeated five or six times, an interval of two or three days is left to let the slough come off, etc. The operation is not painful;

a burning sensation is rarely felt. No bad result has yet followed this treatment, and the improvement obtained by it has been lasting.

6. *White on a Solvent for Diphtheritic Membrane.*—Mr. Hale White (*Lancet*, Oct. 22, 1881) suggests the use of acid glycerine of pepsin as a solvent of the diphtheritic membrane. The case in which he tried it was of unusual severity. The throat was sprayed with half an ounce of the solution with Siegel's spray every two hours, and the treatment continued for three days, when, as no membrane had been coughed up for twelve hours, it was left off. The pieces coughed up had a very soft and gelatinous character, in comparison to the thick and tough pieces that are usually expelled. The child did well; but some time afterwards, owing to sudden changes in the weather, it got broncho-pneumonia, and died. At the *post mortem* examination, there was nothing to show that the pepsin had any ill effects on the lungs, bronchial tubes, or lungs. Mr. White thinks that the chief use of the pepsin was in preventing formation of membranes in the small tubes and bronchi, by mixing with the secretion. He adds that, if a piece of membrane be put in a test-tube with a small quantity of the fluid, the power of the pepsin to dissolve the membrane will be readily attested.

7. *Hartmann on Epistaxis.*—The author (*Zeits. für Ohren.*, Theil x; *Ann. des Maladies du Larynx, etc.*, July 1881) warns against the dangers of plugging the posterior nares, especially if perchloride of iron be made use of at the same time. The presence of the tampon is not only, he says, very disagreeable to the patient, but is apt to cause great irritation of the mucous membrane. If perchloride of iron be used, fresh hæmorrhage frequently occurs when the plug is removed, from the tearing of the mucous membrane to which it has adhered. Dr. Hartmann has seen three cases in which plugging of the posterior nares has been followed by inflammation of the middle ear.

9. *Schæffer on Ozæna.*—Ozæna, according to Dr. Max Schæffer (*Monats. für Ohren.*, No. 4, 1881; *Ann. des Maladies du Larynx, etc.*, July 1881) is nearly always the result of scrofula or of syphilis. It may be due, however, though rarely, to a primary affection of the bones or cartilage. He distinguishes two stages of the affection, a hypertrophic and an atrophic. In the former the secretion is abundant, thick, and creamy, and forms thick crusts, especially in the naso-pharynx. The crusts, when detached, give rise to hæmorrhages, and leave behind them erosions, which are apt to run on to superficial or deep ulceration. The mucous membrane is livid, thickened, and pits on pressure. In the atrophic stage the secretion is less abundant, more fluid and viscid, and forms fine crusts, its opacity being due to the admixture of epithelium. The mucous membrane is pale, thin, and very adherent to the bones, and undergoes fibroid degeneration, whilst the glands are destroyed. The spongy bones are atrophied, and the meatus on each side is considerably enlarged. When due to hereditary syphilis, the ozæna is frequently developed during the first weeks of life, the hypertrophic stage lasting in these cases eight to ten years. The duration is the same when scrofula is the cause. In acquired syphilis the stage is shorter, lasting from six months to a year. Here the affection does not begin in the mucous membrane, but in the periosteum and cartilage of the bone. The author recommends injections of chlorate of potash to be used twice a day, and in the intervals he introduces, in the atrophic stages, plugs of cotton-wool. He condemns the use of carbolic acid, and says that in cases cured by its use smell is permanently lost. Constitutionally, he makes use of the usual remedies.

10. *Smith on the Indications for the Treatment of Naso-Pharyngeal Catarrh.*—Dr. Smith (*New York Med. Record*, August 1881) tabulates the indications for treatment in naso-pharyngeal catarrh as follows. 1. Keep the parts clean. 2. Remove all sources of irritation resulting from occupation, residence, climate, etc. 3. Enforce attention to hygiene and to the general health. 4. If there be obstruction to nasal breathing, remove the obstruction. 5. If there be ulceration use strictly local applications with a view to healing. 6. If there be hypertrophied glandular stricture yielding excessive secretion, remove the hypertrophied portion. 7. If, after the above indications have been fulfilled, there be still hyperæmia, use mild astringents and sedatives and such constitutional treatment as is thought to be indicated. 8. Cease treatment the moment there is no longer a definite indication for it. Dr. Smith considers the fourth indication, *i.e.*, removal of obstruction to nasal breathing, as of great importance, and for a reason which, he believes, has not yet been brought forward. Nasal stenosis causes hyperæmia of the membrane behind it, owing to the rarefaction of the air with each respiration. All the tissues subjected to the action of this partial vacuum must suffer a proportionate congestion, as certainly as the skin under a cupping-glass. From congestion to excessive secretion is but a single step; hence the persistence of the discharge in many cases, and the prompt abatement of it that follows relief of the stenosis.

11. *Bresgen on Chronic Catarrh of the Nasal Fossæ and Pharynx.*—Dr. Bresgen (*Annales des Maladies du Larynx, etc.*, July 1881) enumerates the causes of the above affection as frequent colds, enlarged tonsils, elongated uvula, abuse of tobacco, snuff, and the vitiated atmosphere of warm rooms. Syphilis, he says, is not a cause, as it only affects the nose when it is previously the seat of catarrh. Among the symptoms, he insists on the importance of bleeding and redness of the nose as certain signs of commencing chronic rhinitis. His treatment consists in the insufflation of powdered nitrate of silver and starch (from 0.5 to 10 per cent.), and in obstinate cases he applies the galvano-cautery. He seldom resorts to injections, except in cases attended with much fœtor, and condemns the use of the plug recommended by Gottstein. To facilitate the inspection of the posterior nares he inserts the index finger of the left hand—preferring it to the hook of Voltolini—to draw the palate forward. To overcome the hyperæsthesia of the palate, fauces, etc., frequently present, Dr. Bresgen paints the parts with iodide of glycerine (iodine 0.5—0.1, iodide of potassium 2.5—5, glycerine 25) and affirms that in three applications a sufficient degree of insensibility is obtained. During these applications the patient is forbidden the use of tobacco, alcoholic drinks, and strongly spiced food.

13. *Tauber on the Removal of a Bullet from the Pyriform Sinus.*—The patient (*Archives of Laryngol.*, Jan. 1, 1881), who complained of painful swallowing, hoarseness, and shortness of breath, had received a shot twelve years before in the left side of the neck. The laryngoscope showed that the left pyriform sinus was entirely covered. The sound was introduced, and met with a firm hard body. With the laryngeal forceps, a ball was removed. All the symptoms disappeared in a few days.

14. *Michael on Chronic Laryngeal Affections in Children, the Result of Acute Infectious Diseases.*—The author describes (*Deutsches Archiv für Klin. Med.*, Band xxvii, Heft 6) a series of cases of obstinate chronic laryngeal and tracheal catarrh in children, occurring as a sequel to various infectious diseases. Four cases were those of children in whom a slight hoarseness and shortness of breath on movement remained after the primary affection (whooping-cough, small-pox, diphtheria). Laryngoscopic examination revealed a slight swelling of the hinder laryngeal wall, and upon it a distinct grey zone one millimètre thick (probably of thickened epithelium). An elliptical chink remained between the vocal cords on phonation. In three cases (two after small-pox, one after diphtheria) there were suffocative fits, and the voice was almost extinct. On the hinder laryngeal wall a white or greyish-white zone was seen, consisting of numerous small excrescences. In one case these growths pressed between the vocal cords, and prevented the glottis from closing completely. The vocal cords themselves were normal. In all cases, the internal thyro-arytenoids were partially paralysed, probably from atrophy. The treatment indicated in the milder cases is astringent inhalations; in the severer forms, painting with iodo-glycerine, or cutaneous application of the induced current, or dilatation with Schroetter's bougies. With regard to the troubles which are apt to follow tracheotomy, and which tend to prevent the removal of the cannula, Dr. Michael enumerates the following: 1. Granulations springing either from the tracheal wound or from the hinder wall of the trachea; 2. Inflammatory hypertrophy about the vocal cords; 3. Paralysis of the posterior crico-arytenoids; 4. Spasms of the glottis; 5. Cicatricial stenosis of the larynx and trachea; 6. Softening and consequent yielding of the tracheal rings; or 7. The combination of two or more of these causes. To prevent ulceration of the hinder wall of the trachea, consequent upon pressure of the cannula, the alternate use of a long and a short cannula is recommended. [Ulceration of the tracheal wall may be very readily prevented by the use of Mr. Morrant Baker's flexible tracheotomy-tubes. The comfort to the patient, and the immunity from danger which the use of the soft tube ensures, does not seem to be appreciated by foreign writers as it ought. In the reporter's experience, it is the anterior and not the posterior wall that is apt to suffer from the pressure of the ordinary silver cannula.—*Rep.*]

15. *Langreuter on Syphilitic Stenosis of the Pharynx.*—Dr. Langreuter records a case of pharyngeal syphilitic stenosis (*Deutsches Archiv für Klin. Med.*, No. xxvi). The patient had suffered for seven years with syphilis. Tracheotomy had already been performed for stenosis of the larynx. A firm cicatricial tissue bridged over the naso-pharyngeal cavity above, and the pharyngo-laryngeal cavity below. This was of a greyish-red colour; some of the fibres were of a glistening white. The naso-pharyngeal cavity was closed, with the exception of a chink. Firm projecting bands proceeded from this small aperture, in an arch-like manner, to both sides of the roots of the tongue. The pharyngo-larynx was bridged over by a tightly stretched mass of cicatricial tissue, which drew the roots of the tongue towards the posterior wall of the pharynx. In the middle of this tissue there remained a round opening with sharp hard edges about the size of a pin's head, the only communication between the mouth and the respiratory and digestive tracts. The stricture was incised with a sheathed knife; the tissue was so hard that it creaked while being cut. The patient was at once relieved. Fresh ulcerations interrupted the treatment, and led to a relapse. After a course of inunction the stricture was incised again, and then dilated with Schroetter's bougies. The tracheal cannula was finally dispensed with. The patient breathes, eats, and drinks easily through the pharyngeal opening.

16. *Daly on Nasal Polypi.*—Dr. Daly, in a paper read before the American Laryngological Association (*Arch. of Laryngol.*, May 1881), furnishes the notes of some cases of nasal polypi, and gives a brief outline of treatment for their removal and the prevention of their return. He has noticed that the largest percentage of these growths belong to the myxomata; that the next in frequency are the fibromata; and that there is a tendency in polypi of the former type to change with age into the latter, beginning in the pedicle with a growth of fibrous tissue, and extending throughout the substance of the tumour. Two-thirds of the cases under his own observation were polypi of the middle turbinated bones. One of their chief characteristics is a tendency to recur, unless the mucous membrane be entirely destroyed or altered into a healthy tone. Recurrence does not seem to render them liable to assume a carcinomatous form. Dr. Daly recommends that, in removing polypi or reducing growths in the retro-nasal region by the loop, forceps, or galvano-cautery, the tip of the index finger should be held in the vault of the pharynx as a guide. In operating in the patient's right naso-pharynx, the index finger of the operator's right hand should be used as a guide; in the left naso-pharynx, the finger of the left hand, the patient being instructed to lean a little forward, and press against the operator's finger. By this means, his head is held firm, and sufficient force can be used to overcome the expulsive action of the levator palati muscles, which soon give way, and the tip of the finger is brought directly to the pharyngeal orifices of the posterior nares, while with the right hand the loop handle, the forceps, or the electrode, can be guided with certainty into any of the fossæ of the nasal cavity. This plan, the author thinks, gives many advantages in operating, as the index finger in the retronasal opening is a certain guide and director, as well as an efficient protection to the Eustachian orifices and septum nasi.

W. J. WALSHAM.

17. *Gerster on Wound of the Hard Palate by Fracture of the Lower Jaw: Uranoplasty.*—At a meeting of the New York Society of German Physicians (*New York Medical Record*), Dr. Gerster shewed a man, on whom he had successfully performed an uranoplastic operation. The case was that of a brewer, who had fractured his lower jaw nine years since. At the time of receiving that injury, a splinter of bone had forced its way through the hard palate. Necrosis followed, and finally a triangular opening remained. Speech was very much impaired, and during deglutition portions of food frequently entered the nasal cavities. A piece of soft palate had to be sacrificed in order to secure a linear union. The two edges of the wound were of unequal length, a circumstance which rendered the operation unusually difficult. A little gaping at one extremity at first took place, but cauterisation healed it, and the final result was good.

OTOLOGY.

RECENT PAPERS.

1. WOLF, O.—On the Function of the Chorda Tympani. (*Archives of Otol.*, Dec. 1880.)

2. MOOS, S., and STEINBRÜGGE, H.—A Peculiar Modification of the Osseous Tissue in the Pyramid of the Temporal Bone. (*Ibid.*)

3. WILHELMI, R. F.—Deaf-mute Statistics in the Province of Pomerania and the district of Erfurt. (*Ibid.*)

4. SPALDING, J. A.—Diplacusis Binauralis; Self-observation. (*Ibid.*)

5. BRUNNER, G.—An Interesting Case of Protracted Deafness caused by the Report of a Musket: with Remarks. (*Ibid.*)

6. ELY, E. T.—Skin-Grafting in Chronic Suppuration of the Middle Ear. (*Ibid.*)

7. KNAPP, H.—The Treatment of Eczema of the Ear by Nitrate of Silver. (*Ibid.*)

8. SEXTON, S.—On False-hearing and Autophony in Singers, Speakers, and Performers on certain Musical Instruments. (*New York Med. Rec.*, Jan. 22, 1881.)

9. URBANTSCHITSCH, V.—Observations on Central Affections of the Acoustic Nerve. (*Arch. für Ohrenh.*, Band xvi; and *Med.-Chir. Rund.*)

10. RAYNAUD, MAURICE.—On Diabetic Otitis. (*Annal. des Mal. de l'Oreille, du Larynx*, etc., May 1881.)

11. BARATOUX.—Rhodes's Audiphone at the National Institution for Deaf-Mutes at Paris. (*Ibid.*)

12. TREIBEL, E.—On the Use of the Dentaphone with Deaf-Mutes. (*Arch. of Otol.*, Dec. 1880.)

13. BARATOUX.—Contributions to the Study of the Alterations in the Ear in Deaf-Mutism. (*Annales des Malad. de l'Oreille, du Larynx*, etc., May and July 1881.)

14. MOSLER.—On the Treatment of Chronic Naso-Pharyngeal Catarrh by Washing out from the Naso-Pharyngeal Cavity. (*Deutsche Medic. Woch.*, Jan. 1, 1881. Abstracted in *Med.-Chir. Rund.*)

15. PAUL, C.—A New Sign of Scrofula Furnished by Ear-rings. (*L'Union Méd.*, 1881, Nos. 29, 32, 34, 39, 42, 45, 47, 50.)

16. LADREIT DE LACHARRIERE.—On Congestion and Ankylosis of the Joints of the Ossicles of Hearing. (*Annal. des Mal. de l'Oreille, du Larynx*, etc., July 1881.)

17. MOOS, S., and STEINBRÜGGE, H.—Nerve-Atrophy in the First Cochlear Convolution: its Physiological and Pathological Importance. (*Arch. of Otol.*, March 1881.)

18. MOOS, S.—A Rare Case of Stab-Wound of the Left Half of the Skull. (*Ibid.*)

19. STEINBRÜGGE, H.—A Case of Trepanation of the Mastoid Process: Death by Miliary Tuberculosis. (*Ibid.*)

20. ELY, E. T.—Pyæmia following a Mastoid Abscess: Treated without Medicine: Recovery. (*Ibid.*)

21. HEDINGER, A.—On a Peculiar Exostosis in the Ear. (*Ibid.*)

22. MOOS, S., and STEINBRÜGGE, H.—Anatomo-Pathological Conditions in a case of Malformation of the Right Ear. (*Ibid.*)

23. KNAPP, H.—The Cotton-Pellet as an Artificial Drum-head. (*Ibid.*)

24. MÉNIÈRE, E.—The Treatment of Chronic Purulent Otorrhœa. (Second International Otological Congress. Milan, Sep. 1880.)

25. WEIL.—Preliminary Communication on the Results of the Examination of the Hearing in 4,500 School Children.

26. BOUCHERON.—The Pathogenesis of Deaf-Mutism. (*Soc. de Méd. du IVe. Arrondis. de Paris*, May 30, 1881.)

27. BARR, THOMAS.—Importance of a Knowledge of Diseases of the Ear, etc. (*Glasgow Med. Jour.*, Jan. 1881.)

28. ADAMS, J. A.—On Certain Anatomical Relations between Abscess of the Brain and Aural Disease. (*Glasgow Med. Jour.*, vol. xv.)

29. GRUBER, JOSEF.—On Some of the More Recent Methods of Treating Otorrhœa. (*Allgem. Wiener Medic. Zeitung*, 1880, Nos. 28, etc.; and *Monats. für Ohrenheil.*)

30. WEIL.—On Otorrhea and its Treatment. (*Memorabilien*, 1881; and *Med.-Chir.Rund.*)

31. POLLAK, JOSEF.—Large Gumma on the Mastoid Process and Temple, complicated with Purulent Inflammation of the Middle Ear. (*Allg Wiener Med. Zeitung*, 1881, No. 20; and *Med.-Chir. Rund.*)

32. POLITZER, ADAM.—A Small Instrument for Deaf Persons. (*Wiener Med. Woch.*, 1881, No. 18.)

33. DOUMERGUE, A.—Contribution to the Study of the Auditory Troubles in Bright's Disease. (*Thèse de Paris*, 1881; and *Revue Mens. de Laryngol., d'Otol.*, etc.)

34. CHAMPEAUX.—Contribution to the Study of the Symptoms, Diagnosis, and Pathogeny of Ménière's Disease. (*Thèse de Paris*, 1881; and *Revue Mens. de Laryngologie*, etc.)

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1. *Wolf on the Function of the Chorda Tympani.* — Dr. Oscar Wolf made some observations (*Arch. of Otol.*, Dec. 1880) on a patient in whom the chorda tympani was divided during division of the posterior fold of the membrana tympani. There were complete loss of taste, and insensibility in regard to tactile and thermal excitation, over an area represented by a right-angled triangle, whose hypothenuse was formed by the edge of the tongue, and whose longest side (middle line of the tongue) was two centimètres in length. The paralysis of taste and sensibility consequently affected the tip of the tongue also.

3. *Wilhelmi on Deaf-Mute Statistics of the Province of Pomerania and the District of Erfurt.*— Dr. Hartmann (*Ibid.*) contributes an abstract of Wilhelmi's statistics containing many interesting facts. Wilhelmi's material is too scanty, he thinks, to allow us to formulate a rule regarding the influence of marriage of near kindred upon the occurrence of congenital deaf-mutism in the children. With regard to the propagation of deaf-mutism by marriage, Wilhelmi concludes as follows. 1. Deaf-mutes rarely transmit their deformity to their offspring. (Experience shows that later descendants are more endangered.) 2. The marriages of deaf-mutes in general are not very fruitful. Wilhelmi considers inebriety of the parents as a very important factor in the production of deaf-mutism in the children.

4. *Spalding on Diplacusis Binauralis.* — Dr. Spalding (*Ibid.*), who suffers from otitis media catarrhalis chronica, after exposure of his left ear to the loud noise of a machine in a shoe-manufactory, became affected with ringing in the ears and diplacusis, consisting in the four notes, G^2, G sharp^2, A^2, and A sharp^2, being heard normally in the right ear, whilst in the left ear they were heard a minor third above. A few hours afterwards, the following notes were found altered in a similar manner, viz., G sharp^2, A^2, A sharp^2, and B^2. The next morning the false tone had disappeared. The author suggests as cause of the phenomenon an increase in labyrinthine pressure, secondary to, and dependent upon, some sudden change in the middle ear.

6. *Ely on Skin-Grafting in Chronic Suppuration of the Middle Ear.*— Dr. Ely (*Ibid.*) has operated in nine cases, but with results which, judging from the brief report which he gives of three cases, are not very brilliant. Sloughing of the grafts followed within a few days in most instances, but the author thinks that in some cases the operation had some effect in stimulating cicatrisation, even though sloughing of the grafts appeared to occur.

7. *Knapp on the Treatment of Eczema of the Ear.*—Dr. Knapp (*Ibid.*) prefers the treatment of this affection with nitrate of silver to all other methods. His plan is as follows. After the eczematous surface has been thoroughly cleansed and the scabs and crusts removed as far as possible, it is dried and painted with a one to three per cent. solution of nitrate of silver; a moist sponge being at the time held on the skin immediately below the diseased parts, in order to prevent any of the solution from running down. The parts are then covered with lint or picked linen, which, if secretion be present, may be smeared with cold cream, or a one per cent. yellow mercurial ointment. This process is to be repeated by the surgeon every morning; whilst each evening the patient cleanses the ear and reapplies the ointment. The author has found this treatment sufficient to effect a cure from beginning to end, but in the later stage oleum rusci may be used with advantage.

8. *Sexton on False-Hearing and Autophony.*—According to the author, false-hearing depends upon the circumstance that, in certain diseased states of the ear, the conductive mechanism not only permits sounds within the body, which are usually inaudible, to be heard, but that it fails to transmit in the normal manner to the auditory nerve, sounds that reach it through the surrounding air. The author holds the opinion that undulations of sound in speaking, singing, etc., although always transmitted to the ears through the intervening tissues as well as the air, are in the normal state of the transmitting mechanism excluded; otherwise there would be confusion from interference; whilst in the former case the voice is perceived directly through the tissues of the head, and is false, as regards both pitch and timbre. The author briefly reports eleven cases of various ear-diseases, in which false hearing was present. A practical point which he emphasises is that vocalists, who suffer in this manner, frequently imagine that they have some throat-affection which modifies their voice, whereas, in reality, it is only the ears which are at fault, giving rise to the false hearing.

9. *Urbantschitsch on Central Affections of the Acoustic Nerve.*—Dr. V. Urbantschitsch (*Arch. für Ohrenh.*, Band xvi, 3; and *Med.-Chir. Rund.*) communicates four cases of the following character.—Case I was functional deafness in a case of hysteria, with transference of the aural symptoms under the influence of the magnet to the opposite side.—Case II was deafness for speech in a syphilitic patient, coming on after exposure to cold. The author assumes a syphilitic affection of the brain.—Case III was bilateral deafness in consequence of a slight injury), which the author attributed to a small effusion of blood in the region of the fourth ventricle.—Case IV was sudden deafness after profuse epistaxis. In the absence at the necropsy of all lesions to account for the deafness, the author considered the case analogous to those in which great loss of blood produces sudden amaurosis of both eyes.

10. *Raynaud on Diabetic Otitis.*—M. Maurice Raynaud relates (*Annal. des Malad. de l'Oreille, du Larynx, etc.*, May 1881) a case of diabetes, accompanied by anasarca, occurring in a man aged 47. On Jan. 27, twenty-three days before his death, the patient was seized, without evident cause, with violent pain in the right ear between six and seven o'clock in the evening. The pain increased rapidly till midnight, when free hæmorrhage occurred from the meatus, accompanied by a relief of the pain. The following day, a serous fluid, mixed with blood, was found dropping freely from the ear. It continued to do so for several days, the fluid becoming gradually more serous in character. Examination on Jan. 30 showed that it contained no blood, but a considerable number of leucocytes. A considerable quantity of albumen was found in the fluid, but not a trace of sugar. Examination of the ear showed the membrana tympani covered with a whitish exudation of pseudo-membranous aspect, and, from its upper part, the liquid was seen emerging through a small perforation. The discharge became gradually less, and at the end of ten days was merely a simple oozing, which, however, continued until the patient's death. *Post mortem* examination of the temporal bone, made by Dr. Ladreit de Lacharrière, showed a considerable sized perforation in the anterior segment. The tympanic mucous membrane was red, swollen, and bleeding, and the tympanum contained a red-coloured purulent fluid. The mastoid cells were filled with a reddish liquid containing pus-corpuscles, and their lining membrane was red and softened. The bone-substance was much injected, mottled in places, and presented all the signs of inflammation. The vestibule, cochlea, and semicircular canals presented no sign of alteration. The author considers that in this case the chief, and probably the primary, lesion was the inflammation of the mastoid cells and bone, and likens it to the inflammatory affections of bone in other parts, which occur in diabetic patients. There was no albuminuria in this case, and, after death, the kidneys were found perfectly healthy. The heart also was unaffected.

11. *Baratoux on Rhodes' Audiphone.*—Mr. Rhodes, it appears, tried his audiphone on March 9 last before a distinguished company of medical men and professors at the National Institution for Deaf-Mutes in Paris (*Annal. des Malad. de l'Oreille, du Larynx, etc.*, May 1881). In five deaf persons who could speak, Rhodes' audiphone produced no amelioration in the perception of the voice, and appeared to render musical sounds more confused. The conclusion was arrived at, that it could not be of any use in teaching deaf-mutes to speak.

12. *Treibel on the use of the Dentaphone with Deaf-Mutes.*—The author (*Arch. of Otol.*, Dec. 1880) obtained entirely negative results with this instrument. He concludes that, where deaf-mutes are concerned, the dentaphone, in its present condition at least, cannot be put to any practical use, not even as a means of advancing articulation.

14. *Mosler on the Treatment of Chronic Naso-Pharyngeal Catarrh.*—Professor Mosler (*Deutsche Med. Woch.*, Jan. 1, 1881; and *Medic.-Chir. Rund.*) recommends the use, morning and evening, of a gargle of a glass of cold water, containing one to three tablespoonfuls of a 20 to a 25 per cent. solution of sea-salt. Importance, according to the author, attaches to the application of the fluid to the naso-pharynx, which is to be accomplished as follows. A large mouthful of the gargle being taken, the head is inclined backwards in order to let the liquid run back into the pharynx. Movements of deglutition and spasmodic expirations are then undertaken, the result being that, when they are successful, part of the liquid runs out of the nose when the head is held forward; the remainder of the gargle is expelled through the mouth. Patients who are able to expel tobacco-smoke through the nose learn this method most easily. Afterwards, it is well to

clean the teeth carefully. [Knowing the ease with which gas enters the tympanic cavities during eructation, we should think it not unlikely that the liquid might be driven along the Eustachian tubes by this method.—*Rep.*]

15. *Paul on a New Sign of Scrofula furnished by Earrings.*—Professor Paul, in a series of articles (*L'Union Méd.*, 1881, Nos. 29, 32, 34, 39, 42, 45, 47, 50), first describes a case of eczema of the auricle following on piercin gthe lobule, as an instance of an insignificant operation awakening, as it were, a latent constitutional malady. The great bulk of this essay, however, concerns another interesting question, viz., the effect of constitutional maladies on the healing of operation-wounds, as instanced by the deformities of the lobule left after the piercing of the ears in scrofulous subjects. The author's attention was drawn to this subject as long as sixteen years ago. Short details of 120 cases are given, the great majority of which consist of vertical cicatrices in one or both lobules, often multiple in each ear, and sometimes replaced or accompanied by slits in the lobule. In five cases only was there a history of violence (dragging on the earring) as a cause of the deformity. The author draws the following conclusions. The ulcerative process following the piercing of the ears is not a passing accident, or one immediate on the operation, but it always has a slow, chronic course. In 51 cases in which the time occupied by the ulceration in reaching the free border of the lobule could be determined, it was found to vary from several months to twenty years; the average length of time being about four years and two months. The fact that in as many as 79 per cent. of the cases the cicatrices were multiple, argues, the author considers, for their constitutional origin. Of 116 cases in which the aural deformity was present, 96 presented either scrofulous cicatrices, or the history of other scrofulous affections. From this it results that the majority of patients who present cicatrices, the result of an ulcerative process prolonged for a greater or less time after the piercing of the lobules, give evident signs of scrofula; and it is probable that the proportion is even greater than appears from the above figures, scrofulous antecedents having doubtless escaped observation as the result of imperfect histories. The kind of metal of which the earring is composed has, according to the author, no sort of influence on the ulceration; but the weight of the earring enters, he considers, as an important factor, inasmuch as heavy earrings accelerate the ulcerative process. The author concludes generally that every woman in whom the cicatrices produced by piercing the ears do not form a simple orifice, but an orifice provided with a swelling, or are replaced by a section or a cicatrix, is a scrofulous subject. He finds this sign of scrofula of value in the selection of wet-nurses. The author finally advises against the practice of piercing the ears in subjects who are manifestly scrofulous, but makes an exception in favour of cases in which it is done as a derivative for scrofulous ophthalmia, in which circumstances the earrings may be regarded as setons inserted into the lobules of the ears for therapeutic purposes.

16. *Ladreit de Lacharrière on Congestion and Ankylosis of the Joints of the Ossicles of Hearing.*—According to the author (*Annales des Malad. de l'Oreille, du Larynx, etc.*, July 1881), apart from catarrh, which is a very common cause of this affection, the diatheses giving rise to this form of ear-disease are the arthritic (rheumatism and gout, also migraine), the herpetic, and the syphilitic. He has several times observed an affection of the ossicles coinciding with the disappearance of rheumatism of the shoulder and neck, and *vice versâ*. Syphilitic congestions occur only at a late stage of the disease, and have no distinctive mark. In addition to the treatment of the diathesis present in any given case, the author recommends the internal administration of iodide of potassium (half a gramme daily), the application of an ointment of the same to the mastoid processes, and the instillation of a solution of the same salt into the meatus at night-time; also inflation of the middle ear with air impregnated with iodine vapour.

17. *Moos and Steinbrügge on Nerve-Atrophy in the First Cochlear Convolution.*—In a case of carcinoma of the right anterior central convolution, not directly involving the labyrinth, Moos and Steinbrügge (*Archives of Otology*, March 1881) found quantitative atrophy of the nerve-fibres in the lamina spiralis ossea of the first cochlear convolution. Impairment of hearing for the higher tones, which was observed in this case, bears out Helmholtz's hypothesis, that the nerve-fibres in the neighbourhood of the fenestra rotunda seem to effect perception of high tones, while those situated higher up are intended for the perception of lower tones.

19. *Steinbrügge on Trepanation of the Mastoid Process.*—Dr. Steinbrügge relates (*Ibid.*) the case of a boy, aged 5, suffering from caries of the mastoid process. On account of cerebral symptoms, an already existing fistula in the mastoid bone was enlarged with the gouge, but no collection of pus or movable sequestrum was found. *Post mortem* examination showed tubercular basilar meningitis, also cheesy degeneration of the lymphatic glands, miliary tuberculosis of the lungs, etc. No direct transmission of the morbid process in the temporal bone to the brain could be discovered.

20. *Ely on Pyæmia following a Mastoid Abscess; Treatment without Medicine; Recovery.*—The author considers (*Ibid.*) that in this case careful attention to food, stimulants, and dressings, as well as a free action of the bowels, assisted materially in the favorable termination of the case.

21. *Hedinger on a Peculiar Exostosis in the Ear.*—In the author's case (*Ibid.*) there was a tumour of bony hardness growing from the upper and posterior wall of the meatus, which became visibly smaller under the daily introduction of laminaria tents. Portions removed with the chisel, and examined histologically, showed an inflammatory proliferation of the papillæ and of the connective tissue, with deposition of lime within it (osteoid metamorphosis). Under treatment, the surface of the tumour became smooth and pale. It still, however, filled half the lumen of the meatus; but, as all inflammatory symptoms had subsided, the author did not consider its removal indicated. In regard to the etiology of exostoses, the author excludes syphilis as a cause in forty cases that he has seen. He finds them frequently associated with some other disease of the ear, such as chronic tubal catarrh or suppuration.

23. *Knapp on the Cotton-pellet as an Artificial Drum-head.*—Dr. Knapp (*Ibid.*) reports four cases in which cotton-wool pellets were of advantage in improving the hearing, and in one of which they had been worn for twenty-nine years. He employs cotton-pellets moistened with glycerine and water (1 in 4), and considers that their therapeutic action in arresting profuse discharge on the one hand, and in preventing the mucous membrane of the drum-

cavity from drying up, on the other, is most valuable. In some cases, he considers they are quite indispensable, and may be worn for a lifetime with permanent ease and benefit; in other cases, they are needed only periodically, according as the copiousness of the discharge or the exsiccation of the mucous membrane requires their action in one or the other direction. They should not be worn when the discharge is abundant and offensive.

24. *Ménière on the Treatment of Chronic Purulent Otorrhœa.*—Dr. E. Ménière recommends (Memoir read at the *Internat. Otolog. Congress*, held at Milan in Sept. 1880) a solution of carbolic acid in Price's glycerine (1 in 10), of which two to four drops are to be instilled into the ear (after thorough cleansing) twice daily, or preferably to be applied on cotton-wool by means of a fine pair of forceps. Afterwards, stronger solutions may be used; those of 5 to 10 parts of carbolic acid to 10 parts of glycerine being applied by the surgeon. The author has treated more than 300 cases successfully by this method. It does not appear that this method acts at all rapidly; and the author mentions a case in which, after five months' treatment, there was no improvement, but, by the end of fourteen months, recovery had taken place. He recommends that when the affection is of old standing, the treatment, gradually diminishing the quantity and frequency of the applications, should be continued for two or three months after recovery.

25. *Weil on the Results of the Examination of the Hearing in* 4,500 *School Children.*—The following are some of the conclusions at which Dr. Weil of Stuttgart has arrived from the examination of the above large number of children. The normal ear hears whispered speech of medium intensity at a distance of 66 to 82 feet amongst sufficiently quiet surroundings. Impairment of hearing is of very common occurrence. In the national schools (*Volksschulen*) the hearing of as many as 30 per cent. of the children was defective. This percentage is less in children of the better classes; *e.g.*, in the *Catharinenstift* it was only about 10 per cent. The percentage increases with the age. Perforation of the membrana tympani, with suppuration, was found in 2 per cent. of the children; plugs of cerumen or commencement of the same, in 13 per cent. Most of the children had never been under treatment, and many had not the least idea of their affliction; not a few being considered inattentive, and probably treated accordingly. This corroborates the proposition previously enunciated by the author, viz., that every inattentive child should be examined as regards its hearing power. The author recommends that in schools, at the beginning of every term, the master should test his pupils' hearing, which can be done without much trouble and loss of time. By this plan alone is it possible to prevent children from being misjudged.

26. *Boucheron on the Pathogenesis of Deaf-mutism.*—M. Boucheron, at the Société Médicale of the sixth Arrondissement of Paris, May 30th, 1881, again brought forward his views in regard to naso-pharyngeal catarrh as a cause of deaf-mutism (see LONDON MEDICAL RECORD, March 15, 1881). It appears that ten deaf-mutes were actually under treatment, of which six had begun slightly to recover their hearing. In the discussion which followed, M. Machelard thought that the cerebral organization of deaf-mutes was defective.

27. *Barr on the importance of a Knowledge of Diseases of the Ear to the Student and General Practitioner.*—In an able lecture (*Glasgow Med. Jour.*, Jan. 1881) Dr. Barr brings forward, in a clear and concise manner, his views on the above subject. He urges the importance of attention to diseases of the ear for three chief reasons. 1. The great prevalence of diseases of the ear.—Their frequency, the author considers, is often underestimated, 'because probably there is no part of the body where disease so often exists uncared for by the patient and his ordinary medical attendant'. 'It is', according to the author, 'especially amongst the lower classes of the community, that considerable impairment of the function of hearing may exist without interfering in any marked degree with their work or with their intercourse one with another, and it is long before it is sufficiently serious in their estimation to require medical help. 2. The serious character of the accompaniments and consequences of ear-diseases.—Under this head the author alludes to the isolation of the deaf, and the annoyance caused to the deaf person's friends by his affliction, in addition to the well-known tinnitus, vertigo, and more serious accompaniments of ear-affections. 3. As a third incentive to the study of otology, the author brings forward the improved methods of examination and treatment in this department which we possess at the present day, and draws a graphic sketch of the state of matters in the past 'which unfortunately is not yet altogether in the past'. The general practitioner should, the author considers, 'be in a position to examine the interior of the ear, just as he auscultates the chest, feels the pulse, or examines the pupil'. 'Besides,' as the author adds, 'many valuable opportunities may present themselves in general practice for observing ear-diseases at an early stage, and checking their further progress.' [We recommend a perusal of this short lecture to those for whom it is intended.—*Rep.*]

28. *Adams on Abscess of the Brain and Aural Disease.*—In this paper (*Ibid.*, vol. xv) the author's argument is as follows. 1. Aural diseases are more frequent in the early than in the later stages of life, and suppurative discharges from the ear follow the same law; in support of which he adduces statistics from Kramer, Wilde, and Roosa. 2. Contrary to what might be expected, and to what is currently believed, abscess or suppuration in the brain, whether encysted or diffuse, is much more frequent in advanced life than at an early age. The author has constructed a table of 105 cases of abscess of the brain due to various causes from different observers, from which it appears that 5 per cent. of the cases occurred in childhood, and above 72 per cent. in adult life. In another table, consisting of 80 cases of abscess of the brain, either originating exclusively from, or directly associated with, disease of the ear, 11 per cent. only occurred in childhood, and 63 per cent. in adult life. 3. There are anatomical peculiarities of structure in the organ of hearing, differing in the infant and in the adult, and which explain the greater frequency of abscess of the brain in adult life as originating from disease of the ear. Under this head the author alludes to the different conditions of the mastoid process and cavities found at different periods of life. In regard to deficiency of the tegmen tympani, which Toynbee found in 5 per cent. of cases, he considers that the majority of the cases where this abnormality was present must have been pathological; for in over 100 crania which the author has carefully examined, in no one instance did there exist such a deficiency. In the child, the author remarks, the tendency of the suppurative

flow is nearly altogether outwards, because the purulent matter finds less hindrance and a readier vent to the external surface through the thin and imperfect suture that forms the junction of the squamous with the mastoid process of the temporal bone behind and close to the meatus. 4. Under certain conditions, there is an abnormal state of the cerebral circulation which admits of a direct vascular connection between the ear and the brain. In this connection, the author first shows how the lateral sinus may become inflamed, may receive septic matter carried from the tympanum and mastoid cells, and may become more or less occluded through various causes. Whatever the cause of the obstruction, however, the flow of blood being arrested just as it should pass out of the cranium, a reverse stream of venous blood must take place in the sinuses. But the sinuses being practically non-dilatable, every collateral channel is overtaxed to carry off the accumulating blood. The superior petrosal sinus on the affected side, which is fed by veins from the inferior surface of the middle cerebral lobe, and also by veins from the tympanum and internal ear, is the first to become overcharged. The cerebral and cerebellar veins, and the inferior petrosal and longitudinal sinuses, may also receive some of the reversed current. These veins, however, are dilatable and have exceedingly thin walls, which under distension are liable to become varicose. The effect of this distended varicose condition is a continued and localised pressure upon the delicate surface of the brain, with consequent œdema and impaired nutrition. The chain of diseased process is, therefore, the author considers, very connected, and quite sufficient to induce softening or other form of diseased action, such as suppuration; and this altogether irrespective of the liability to the deposit of septic matter, which, if present in the lateral sinus, has by the circuitous channel just described direct access to the surface of the brain. The author concludes by calling attention to the importance of an early and earnest attention to the diseased condition commonly called a 'running ear', and to the 'probable, nay, certain value which should be placed on the operation of trephining the mastoid bone in cases of retained pus'.

29. *Gruber on the Treatment of Otorrhœa.*—Professor Gruber (*Allgem. Wiener Med. Zeitung*, 1880, Nos. 28, 29, 30) discusses three methods now in vogue, viz.: 1. Schwartze's treatment with strong solutions of nitrate of silver; 2. The method of treatment with spiritus vini rectificatus simus; and 3. Bezold's powdered boracic acid treatment; all of which the author has used with great benefit. The first plan of treatment he finds best in cases of extensive perforation, in which the tympanic mucous membrane is largely exposed. To avoid cauterising the Eustachian tube and throat unnecessarily, he introduces the caustic solution by means of a syringe, whilst the patient's head is resting on the opposite side of his occiput. The nitrate of silver is then neutralised by the injection of a warm solution of common salt. The strength of the caustic solution employed is 15 to 40 grains to the ounce. The effect of this treatment is usually rapid; and if four or five cauterisations fail of their effect, the author discontinues them. He has compared the action of boracic acid and of borax. He finds the latter, in concentrated solution, more effectual in otorrhœa as a symptom of 'chronic middle-ear catarrh accompanied by destruction of the drum-head,' than the powdered boracic acid; in chronic suppurative inflammation of the middle ear, on the other hand, in which there is destruction of the membrane when the patient comes under treatment, the boracic acid often renders very good service, but it must be continued for several weeks after the discharge has ceased, or relapse may occur. In cases of this description in which there are no polypoid growths, the author almost always employs first the boracic acid treatment, and only in the event of this failing does he have recourse to other methods.

30. *Weil on Otorrhœa and its Treatment.*—Dr. Weil (*Memor.*, 1881) is strongly in favour of Bezold's boracic acid treatment in chronic suppuration in the tympanic cavity. For eczema he recommends the following ointment: salicylic acid, half a gramme; dissolve in a little spirit, and add vaseline, 15 grammes.

32. *Politzer on a small Hearing Instrument.*—Professor Adam Politzer describes (*Wiener Med. Woch.*, No. 18, 1881) a small hearing-tube as of benefit in some cases of deafness. In principle it is based on the fact, first shown by the author, that the reflection of sound from the concha is intensified by the hollow formed by the posterior surface of the tragus. The little instrument is made of vulcanite, and has the shape of a horn, the smaller end being inserted into the meatus, and the larger aperture being directed backwards and fitting into the concha. The instrument is most effectual when the sound-waves have their origin directly opposite the patient's face. In 115 cases in which it was tried, it was found that the perception of the metronome rarely increased in proportion to that of the voice; in fact, it was often sensibly diminished. In regard to the voice, as a rule, the greater the degree of deafness the less the effect of the instrument. Of the above 115 cases, in 32 it produced no effect on the hearing distance, and in 12 it diminished the hearing power. The greatest improvement was found in three cases, in which the hearing distance was improved from 1½ and 2 mètres to 5 mètres. Three cases are mentioned in which it was of service for hearing in the theatre or opera-house.

33. *Doumergue on Auditory Affections in Bright's Disease.*—Dr. A. Doumergue (*Thèse de Paris*, 1881; and *Revue Mens. de Laryng., etc.*) has examined twenty-seven patients suffering from Bright's disease; thirteen had no ear-affection, whilst fourteen presented various functional troubles (hardness of hearing and tinnitus). The author is of opinion that these troubles are due either to catarrh of the tympanum, or to hæmorrhage into that cavity; but if during life there be no objective aural symptoms, he admits the possibility of œdema of the acoustic nerve. Necropsies will, however, be necessary to ascertain the lesion in these cases.

E. Cresswell Baber, M.B.

REVIEWS.

Manual of the Physical Diagnosis of Diseases of the Heart, including the Use of the Sphygmograph and Cardiograph. By A. E. Sansom, M.D. Third edition. London: J. and A. Churchill. 1881.

We are glad to welcome a third edition of this useful little manual. Clear, precise, and well arranged, especially in the first part of the work, it serves as an excellent introduction to the study of cardiac diseases. Here and there the author adopts,

perhaps, rather too dogmatic a tone on subjects which may well admit of difference of opinion; but positiveness of statement has its advantages in a manual for students, and is to be preferred to the over-refinement and hesitancy of some other writers. On the questions, however, of the diagnostic value of the sphygmograph and cardiograph, we find Dr. Sansom speaking with a positiveness which the highest authorities on the use and applications of these instruments would, we feel sure, be unable to sanction. Nor do his conclusions, as he states them, seem justified by his premises. The work, however, is pleasantly written, and contains a vast amount of useful information in a convenient form.

Lehrbuch der Physikalischen Heilmethoden für Aerzte und Studirende. Von Dr. M. J. ROSSBACH, Professor der Medicin und Vorstand des Pharmakologischen Instituts an der Universität Würzburg. Erste Halfte. Berlin: August Hirschwald. 1881.

Text-Book of Physical Therapeutics for Practitioners and Students. By Dr. M. J. ROSSBACH, Professor of Medicine and Director of the Pharmacological Institute in the University of Würzburg. Part I. Berlin: August Hirschwald. 1881.

THIS work is one of a most useful character. Its aim is to bring before practitioners in a compact form the physiological action, therapeutic uses, and mode of application to the cure of disease, of those remedies which nature places ready to our hand. Such a work, to be of value, demands in the author experience and mental habits of peculiar kind, requires him to be receptive yet cautious, able to extract from vague and, frequently, biassed results the scientific truth contained. These qualities Dr. Rossback unites with a power of clear and lively exposition, which makes this first instalment of his work eminently readable.

He discusses the subject, so far as he has advanced, under three headings :—Air, Climate, and Cold and Warmth. Under the first heading, Dr. Rossbach enters fully into the therapeutic uses of compressed and of rarefied air, giving a description of the instruments used, both the portable pneumatic apparatus and the pneumatic chamber, and laying down the rules and cautions to be observed in those diseases to which the treatment is applicable. 'What mankind can have easily and cheaply, that it neither heeds nor values.' So says Dr. Rossbach. Were it not so, these expensive and not unfrequently dangerous apparatus may in many instances, such as small chest with general debility, predisposition to consumption, bronchial catarrh, etc., be most efficiently replaced by a system of respiratory gymnastics, like that described in detail by Dr. Rossbach. The more simple and natural exercises would be such as reading aloud, singing, and walking, more especially on gentle ascents, so as to induce deep and slow rather than rapid superficial breathing. In addition to these, a most efficient method of strengthening the respiratory function is the use of actual voluntary efforts in respiration, strong deep inspirations and prolonged expirations being made according to the strength of the patient; for example, for the space of fifteen minutes every two hours.

Under the head of Climate, Dr. Rossbach discusses the effects of atmospheric temperature, pressure, and moisture, as also wind, atmospheric purity, and soil. On page 71 he give an amusing account of the German terror of fresh air, a terror not altogether unknown even in England. His remarks as to the choice of a health-resort, and on what he rightly considers of more importance—the proper mode of living thereat—are probably as valuable as any part of the work. As he has already discussed Cold and Warmth from one point of view under Climate, his remarks on this head mainly resolve themselves into an exposition of the principles of hydrotherapeutics.

Altogether, we cannot too warmly commend this work to physicians generally; not merely to those whose patients can afford expensive remedies, but also to those who have to do with a middle-class, more or less limited as to purse and time.

JAMES ANDERSON, M.D.

The Influence of Barometric Changes upon the Body in Health and Disease. By ANDREW H. SMITH, M.D. New York.

THIS is a reprint from the *Archives of Medicine*, and begins by noticing the effects of a pressure of two or three atmospheres upon the human body. Pain of the extremities, vomiting, more or less complete paralysis, with headache, vertigo, and coma, are stated to occasionally occur. Sometimes these symptoms supervene after a short exposure, but in many persons no evil effects follow exposure to these abnormal pressures. Dr. Smith says that, 'hence we deduce the law, that under high atmospheric pressure, the centres will be congested at the expense of the periphery'; and also points out that the removal of the pressure, and not the pressure itself, is the immediate cause of the seizure.

Dr. Smith also enumerates several other 'laws', but he fails to see that the symptoms described are not produced by atmospheric pressure, but by a mechanical force such as cannot, under any ordinary circumstances, be exerted on the body. He then argues that it is evident that similar changes in the circulation must take place to some extent wherever there is a rise in the barometer, and conversely, that a fall of mercury must result in changes similar in kind, however slight in degree, to those attending a change from the caisson into the open air. He also believes that the pains in the bones, so often felt by some persons previously to a storm, are caused by diminished atmospheric pressure, whilst the feeling of good health, which is so noticeable during bright weather, is caused probably by increased atmospheric pressure. Also that the feelings of malaise in damp weather chiefly depend on reduced pressure.

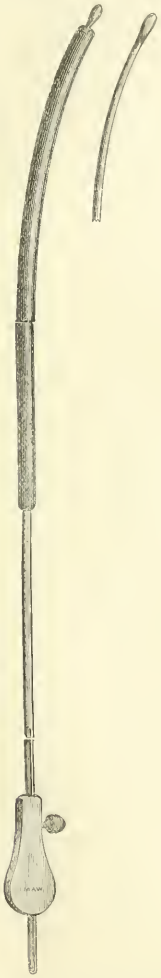
Dr. Smith does not give any statistics to show that his theories are based upon facts, but suggests that results of great scientific value may be obtained by comparing notes of cases with barometric tables. Investigations of this kind have been made, but the difficulty of eliminating the effects of heat, moisture, and velocity of wind has prevented any decided results being obtained. Dr. Smith seems to place too little value on varying hygrometric states of the atmosphere, which play so important a part in checking or increasing the transmission of watery particles from the lungs and external surface of animals to the surrounding air.

J. W. TRIPE, M.D.

NEW INVENTIONS.

DILATOR OF THE CERVIX UTERI.

The annexed sketch represents a new form of instrument for gradually dilating the uterine neck. It was planned by Dr. James, of the Chelsea Hospital for Women, and made under his instruction by

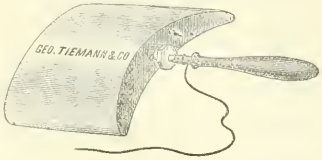


Messrs. Maw, Son, and Thompson. The main feature of the contrivance consists in the employment of a flexible tube which glides along the stem of the sound into the uterus, the handle of the sound having been taken off, and then, after the tube has been placed on the stem, re-applied. The smallest tube has the diameter of No. 5 catheter, the next tube that of No. 6, and so on in succession up to No. 12; altogether there are eight tubes. It is stated that very

satisfactory results have already been obtained from the use of this instrument in certain cases of cervical stenosis.

INSTRUMENTS FOR ELECTRO-MASSAGE.

Mrs. Sarah E. Post, a trained nurse of Bellevue Hospital, New York, brings under the notice of the medical profession certain appliances which



have been found useful in general faradisation. The first is a curved-plate electrode, constructed upon a chord of four and three-quarter inches, with arcs of 50 deg. and 114 deg., and a width of three and a half inches. It has been applied by its convex surface

to the hollow of the foot, the suboccipital and lumbar regions, and the concavities of great joints; by its convex surface to the hypogastrium, over the thigh, etc. In one end is a removable screw for filling the can with warm water, by which means any desired temperature may be given to it; also a weight of about six ounces, which enables it to apply itself closely to a part and to maintain its own position. It was designed as an improvement upon the plane plate and the flat sponge, compared with which it is stable in position, of an agreeable temperature, adapted to the curves of the body, and does not require moisture other than that furnished by the skin.

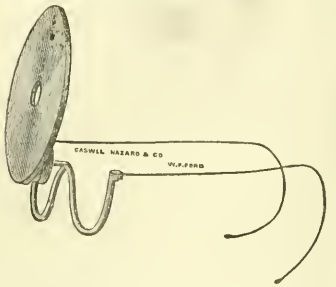
With this article applied to the surface of the patient and a plane plate at the feet of the operator, there is possible a comfortable and effective electro-

massage as practised by Mrs. Post during the past two years, the current being distributed through the hands of the attendant, the movements being those of a true massage.

The second is an application of the roller lately introduced in connection with certain induction machines. The instruments are made by Messrs. G. Tiemann and Co. of New York.

AN AURAL AND LARYNGEAL HEAD MIRROR.

This is a convenient and portable instrument that may be safely carried in the pocket in a case, or introduced into the aural and laryngeal pocket-case. The mirror is attached to a spectacle-frame, which increases its weight but little; and, when worn upon



the head, it is certainly much cooler than any arrangement with an elastic band. It has another advantage, that it does not disarrange the hair. This device has been perfected by Mr. Ford, of Messrs. Caswell, Hazard and Co. of New York.

MISCELLANY.

KÖNIGSTEIN ON THE EYES OF NEW-BORN CHILDREN.—Through the kindness of Prof. Späth, the author was enabled to examine the eyes of the children of the second lying-in clinic, and reports (*Med. Jahr. der K. K. Gessel. der Aerzte zu Wien*, 1881) the following conclusions.—1. The eye of the child is probably exclusively hypermetropic. 2. The colour of the child's iris is not invariably, but frequently, blue. 3. The difference in breadth and appearance between the retinal arteries and veins is not so great as in adults. 4. In a great many cases remains of the pupillary membrane are to be found, and in 10 per cent. there are extravasations of blood in the retina.

THE LATE M. NACHET.—At the last meeting of the Royal Microscopical Society the death was announced of M. Camille Sébastien Nachet, the founder of the well-known firm of opticians, Nachet et Fils of Paris. Early in life M. Nachet formed a friendship with Chevalier, the eminent optician of Paris; he took great interest in the construction of optical instruments, particularly microscopes, on which Chevalier was specially engaged. At that date the improved manufacture of various kinds of flint glass by Guinaud (the predecessor of Pfeil) of Paris, gave a great impetus to the improvement of microscopes on the Continent, while engaging the attention of Brewster, Herschel, Goring, Dollond, Britchard, etc., in England. In 1834 M. Nachet undertook the direction of the microscope department in Chevalier's house, and during six years his skill and ingenuity largely contributed to the reputation of the house. In 1840 he commenced business on his own account, devoting himself particularly to the microscope and the specialities required in ophthalmic surgery. In 1842 he contributed a paper to the *Académie des Sciences*, tome xiv, describing the construction of achromatic lenses, in which curves of half a millimètre in radius were utilised. From that date he received encouragement from some of the leading scientific men of Europe, such as Amici, Arago, Milne-Edwards, and, later on, of Drs. Lebert, Robin, etc., for whom he executed numberless experimental devices. In 1843 he exhibited at the Académie des Sciences his *camera lucida*, which is still regarded as one of the best forms of that instrument. In 1844-5-6, his name figures in the *Comptes rendus* with numerous improvements in the microscope. In 1847 he brought out his prism for oblique illumination, using the mirror in the axis—the forerunner of a large number of devices in which the total internal reflection of glass surfaces has been utilised. His son then joined him in partnership, and the firm brought out in rapid succession binocular microscopes, dissecting microscopes, etc., which occupy a prominent place in the popular text-books. M. Nachet's liberality in carrying out the construction of experimental apparatus rendered his house a favourite resort of amateurs of the microscope. For some years past he had ceased to take active part in the business. His death took place in Paris on the 28th Oct., in his 83rd year.

EXTREMES OF TEMPERATURE IN 1881.—In Mr. Symons' monthly *Meteorological Magazine* for February and August, 1881, are given accounts of the very low temperature recorded in the month of January, and the very high temperatures in England and in many parts of Europe in July. It is somewhat singular that one of the most intense frosts and the hottest day recorded during this century should have occurred in one year. From the 7th to the 26th of January the cold was intense over the greater part of Scotland, the north-west of England, and the central part of Ireland. On the 13th, the lowest reading for the day was registered at Cardigan, viz., 2 deg. Fahr, or 34 degrees below freezing point. On the 14th, readings below zero occurred in several parts of the country, the lowest being: −4 deg. at Corwen; −3 deg. at Cardigan; and −1 deg. at several places in Scotland. On the 16th, the lowest readings were: −12 deg. at Blackadder; −10 deg. at Stobo; −8 deg. at Kelso and Corwen; and −7 deg. at Scaleby and Alston. On the 17th, the lowest readings were: −22 deg. at Blackadder; −16 deg. at Kelso; −15 deg. at Stobo; −11 deg. at Lauder; and −10 deg. at Melrose. On this day, readings below 10 deg. prevailed over nearly the whole of Scotland, and the north, east, and west of England. At Greenwich, the lowest reading was 12.7 deg. Fahr. The contrast to these readings on July 15th was very marked, as at Alton, in Hants, 101 deg. was registered; 100 deg. at Aldesbury, Salisbury; 97.1 deg. at the Royal Observatory, Greenwich; 96.7 deg. at Foxgrove, Beckenham; and between 94 deg. and 95 deg. in various suburbs of London. Along the coast, as might have been expected, the temperatures were not so high, but even near Lowestoft, 88.5 deg. was registered. At Ramsgate it was 83.3 deg.; at Guernsey, 80.5 deg.; at Scarborough, 80.3 deg.; at Devon, 80 deg. Similar high temperatures prevailed in July nearly all over Europe: 94.8 deg. having been observed at Rome; 102.6 deg. at Madrid; 101.1 deg. to 99 deg. at Paris; 102.4 deg. at Bordeaux; 96.6 deg. at Geneva; 92.3 deg. at Vienna; 94.5 deg. at Berlin; and 95.4 deg. at Brussels. The effect of these temperatures on the public health was very great. In London, during the week ending January 8th, when the mean temperature was + 0.7 above the average, there were only 1,510 deaths registered against 2,016 and 2,114 in the two weeks of excessive cold, viz., from January 15th to the 29th. In the week ending June 25th, before the very hot weather began, there were only 1,399 deaths registered, against 1,816, 1,943, and 2,000 deaths, during the three hottest weeks in July. Extreme heat and cold appear to be nearly equally injurious to the inhabitants of England, probably partly because of the conditions under which we live, and also because our habits are not suitable for preventing the injurious effects of extreme vicissitudes of weather.

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British Medical Journal.

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"*The most certain and the most comfortable in its action of all the aperient waters. The special indications for its use are, in costiveness (especially in that of pregnancy), in portal congestion with tendency to hæmorrhoids, and in sluggish action of the liver.*"
Inspector-General Macpherson, M.D.,
Author of "Baths and Wells of Europe."

Hunyadi János In Bilious Attacks and Sick Headaches.
"*It is highly beneficial to persons of sedentary habits, and in what are called bilious attacks.*" Dr. Silver, F.R.C.P.,
Physician and Lecturer on Clinical Medicine, Charing Cross Hospital.

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New York, President of the Gynæcological Society of America; Honorary Fellow of the Obstetrical Societies of London and Dublin.

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"New York Medical Journal," *August* 1880, Dr. F. Weir,
in Lecture delivered to the College of Physicians and Surgeons, New York.

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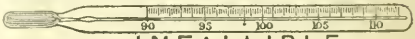

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TESTIMONIALS.

Thorpe Hamlet, Norwich, February 23rd, 1881.

SIR,—A short time since I was induced by the novelty of the title to send for a bottle of your Liebig's Extract of Meat and Malt Wine. I was perfectly acquainted with the value of the *Extractum Carnis*, and not quite a stranger to the invigorating and fortifying properties of Malt Wine, and, therefore, felt a natural curiosity to test them when combined. Men who work hard, as I do, not muscular hard work, but that which is quite as exhausting, viz., brain work, very often experience the need of, and have sometimes an almost irresistible craving for, a 'pick me up'; and very often the panacea for a time for lassitude, and that state of mind which renders work irksome, are alcoholic stimulants, the use of which must sooner or later end disastrously. The man who can furnish a remedy sure, certain, and harmless, for the lassitude which follows constant brain work, is a benefactor of his species, and may be said to have added many years of usefulness to the lives of useful men. Your extract, if a success, and when more generally known, will be used by all toilers of the mind.

Yours faithfully, O. D. RAY.

LIEBIG'S EXTRACT OF MEAT AND MALT WINE (COLEMAN'S).

Queen's Crescent, Haverstock Hill, March 5th, 1881.

DEAR SIR,—Some time since, being greatly fatigued with over-work and long hours at business, my health (being naturally delicate) became very indifferent. I lost all energy, strength, and appetite, and was so weak as to be scarcely able to walk. As you are aware, I sent for a dozen of your Extract of Meat and Malt Wine, which, in a few days, pulled me up marvellously. Three or four glasses of it daily have quite altered and restored me to better health than ever, 'without the assistance of a doctor'. I am now giving it to my son twelve years of age, whom we have always thought consumptive, and from a puny ailing boy he seems to be fast growing into a strong healthy lad. Enclosed you have a cheque. Please send me two dozen of the 'Extract'. With thanks for your prompt attention to my last.

I am, Sir, yours truly, GEORGE A. TYLER.

LIEBIG'S EXTRACT OF MEAT AND MALT WINE (COLEMAN'S).

Granspound, February 25th, 1881.

Mrs. Coulson thanks Mr. Coleman for the book and stamps, and she has no doubt but that 'the tonic' is a good one. Mrs. C. encloses twelve stamps for basket.

LIEBIG'S EXTRACT OF MEAT AND MALT WINE (COLEMAN'S).

Vicarage, Kingsbridge, Devon, January 25th, 1881.

DEAR SIR,—We are ten miles from the railway, and have been snowed up, consequently the wine has only just arrived. I enclose a cheque for £2 11s. 6d. I like the wine, and will recommend it.

Mr. Coleman, Norwich. Yours faithfully, A. N. KINGSTON.

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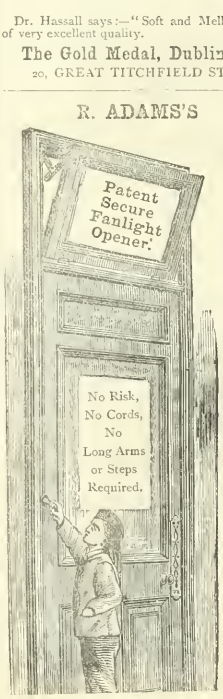

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LONDON, S.E.

We fix when required

FERRIS & COMPY.'S
ANODYNE AMYL COLLOID.

(Secured by their Registered Trade Mark.)

Strongly recommended as a most valuable topical application in cases of Neuralgia, Sciatica, Lumbago, and all Muscular Pains. It is prepared with Hydride of Amyl, Aconitia, Veratria, and Ethereal Collodion, etc. The Hydride of Amyl, by its rapid volatilisation, often produces immediately the desired result; but should the pain continue, the alkaloids can be brought into increased activity by applying moist Spongio-Piline over the Collodion film. This preparation has, in the hands of a large number of medical men, given the MOST MARKED AND SATISFACTORY RESULTS in Neuralgia and Muscular Rheumatism.

TREATMENT OF NEURALGIA—Letter from Mr. METCALF JOHNSON.

[*To the Editor of 'THE MEDICAL TIMES AND GAZETTE'.*]

'Sir,—May I ask you to lay before your readers the following results of my experience in the treatment of Neuralgia, which is to my mind so likely to afford relief to suffering humanity that I do not feel justified in witholding it? The treatment consists in painting the part affected with Anodyne Amyl Colloid, prepared by Messrs. Ferris & Co., Druggists, of Bristol, and in the exhibition of a remedy composed of the Tincture of Gelseminum and Tincture of Guarana. The following cases of relief will be my justification for offering advice to use a prescription of a somewhat secret nature:—

'J. B. called one morning, suffering from facial neuralgia in all the four points of the surface developmeot of the facial nerves. I painted his face over the four spots, and before the liquid was dry his pain was gone. It returned the next day, but was again relieved by the remedy, the relief lasting for twenty-four hours.

'I met A. B. in the street, who was complaining of an obstinate Neuralgia, which had resisted several of the usual remedies. A trial of the treatment here indicated was attended with immediate relief.

'It has been tried, I believe, at my suggestion, by one member at least of a family of three of my professional brethren.

'A patient suffering from podagric Neuralgia of the forearm finds such relief that frequent resort is had at night to the use of the painting with the Anodyne Colloid.

'A few days since, a lady sufferiog from that painful affection called "soft teeth", caused by caries, and in whose case considerable swelling was apparent, found immediate and permanent relief by painting the cheek with the remedy.

'A clergyman, of very high nervous organisation, and in whom, as is often the case, considerable strength of mental power is developed, described the relief which was obtained by use of both the remedies as "like magic". In several other instances, of which I have kept no record, relief has been obtained by the use of one or both remedies.

'Hoping this will induce more of your readers to try the remedies suggested, I leave the case in your hands, merely adding that the Anodyne Amyl Colloid professes to be a solution of Aconitine and Veratrine, with Hydride of Amyl in a medium of Collodion; but the proportions are not stated. The Tinctures of Gelseminum and Guarana are in all probability better known to your readers. I have, at the request of Messrs. Ferris & Co., already given them my testimony to the value of their preparation, in a letter addressed to them a few weeks ago. If you will kindly insert these few remarks in your paper, I think you will oblige many of your subscribers, as you will also,

'Lancaster, *May* 1878.' 'Yours, etc., METCALF JOHNSON.'

[*From 'THE MEDICAL RECORD', London, May* 15, 1880.]

'We have submitted to trial the "Anodyne Amyl Colloid", prepared by Messrs Ferris & Co., of Bristol. It is prepared with Hydride of Amyl, holding in solution Aconitia and Veratria, and combined with Ethereal Collodion. *We have tried it in Neuralgia and Muscular Pains with marked benefit.*

'The Amyl rapidly volatilises, leaving a Collodion film on the skin.

'The intensity of the action of the alkaloids may be increased by the subsequent application of spongio-piline moistened with warm water.'

FERRIS & CO.'S ANODYNE AMYL COLLOID.

In 1 oz., 2 oz., and 4 oz. Bottles, 1s. 6d. per oz.; in 8 oz. and 16 oz. Bottles, 1s. 3d. per oz.

IMPORTANT CAUTION.

Medical Gentlemen are earnestly and respectfully desired to observe that they are supplied with Messrs. FERRIS & CO.'S ANODYNE AMYL COLLOID. This preparation differs essentially from all others. Some UNRELIABLE and USELESS imitations are being advertised, which bear no resemblance either in composition or effect to FERRIS & CO.'S special formula. See that every Bottle bears FERRIS & CO.'S Registered Trade Mark.

EMPLASTRUM BELLADONNÆ FLUIDUM.

FERRIS & CO.

This application is recommended by Dr. H. Miller of Glasgow, and other eminent practitioners, in acute affections of the breasts. It is prepared with alcoholic extract of belladonna, collodion, and camphor, the latter being added to arrest the mammary secretion.

Dr. Frank Davison, of Saffi, Morocco, says:—'I am very much pleased with the Emplastrum Belladonnæ Fluidum. I have tried it recently, and it prevented suppuration in the breast of a lady. The glands were very much swollen, and in about eight hours after the first application the pain disappeared, the breast softened, and matters went on afterwards in a most satisfactory manner.'

FERRIS & CO.'S EMPLAST. BELLADON. FLUID., 6d. per oz., 7s. per lb.

FERRIS, BOORNE, TOWNSEND, AND BOUCHER,

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